RECORD

SHOUT
SHARE
IT

Table of Contents ..... iii-xiv
List of Figures ..... xv-xvi
List of Tables ..... xvii-xviii
Preface ..... xix-xx
Introduction 1-4
Chapter 1 5-12
Chapter 2 13-20
Chapter 3 21-28
Chapter 4 29-36
Chapter 5 37-44
Chapter 6 45-52
Chapter 7 53-60
Chapter 8 61-68
Chapter 9 69-76
Chapter 10 77-84
Chapter 11 85-92
Chapter 12 93-100
Chapter 13 101-108
Chapter 14 109-116
Chapter 15 117-124
Chapter 16 125-132
Chapter 17 133-140
Chapter 18 141-148
Chapter 19 149-156
Chapter 20 157-164
Chapter 21 165-172
Chapter 22 173-180
Chapter 23 181-188
Chapter 24 189-196
Chapter 25 197-204
Chapter 26 205-212
Chapter 27 213-220
Chapter 28 221-228
Chapter 29 229-236
Chapter 30 237-244
Chapter 31 245-252
Chapter 32 253-260
Chapter 33 261-268
Chapter 34 269-276
Chapter 35 277-284
Chapter 36 285-292
Chapter 37 293-300
Chapter 38 301-308
Chapter 39 309-316
Chapter 40 317-324
Chapter 41 325-332
Chapter 42 333-340
Chapter 43 341-348
Chapter 44 349-356
Chapter 45 357-364
Chapter 46 365-372
Chapter 47 373-380
Chapter 48 381-388
Chapter 49 389-396
Chapter 50 397-404
Chapter 51 405-412
Chapter 52 413-420
Chapter 53 421-428
Chapter 54 429-436
Chapter 55 437-444
Chapter 56 445-452
Chapter 57 453-460
Chapter 58 461-468
Chapter 59 469-476
Chapter 60 477-484
Chapter 61 485-492
Chapter 62 493-500
Chapter 63 501-508
Chapter 64 509-516
Chapter 65 517-524
Chapter 66 525-532
Chapter 67 533-540
Chapter 68 541-548
Chapter 69 549-556
Chapter 70 557-564
Chapter 71 565-572
Chapter 72 573-580
Chapter 73 581-588
Chapter 74 589-596
Chapter 75 597-604
Chapter 76 605-612
Chapter 77 613-620
Chapter 78 621-628
Chapter 79 629-636
Chapter 80 637-644
Chapter 81 645-652
Chapter 82 653-660
Chapter 83 661-668
Chapter 84 669-676
Chapter 85 677-684
Chapter 86 685-692
Chapter 87 693-700
Chapter 88 701-708
Chapter 89 709-716
Chapter 90 717-724
Chapter 91 725-732
Chapter 92 733-740
Chapter 93 741-748
Chapter 94 749-756
Chapter 95 757-764
Chapter 96 765-772
Chapter 97 773-780
Chapter 98 781-788
Chapter 99 789-796
Chapter 100 797-804
Chapter 101 805-812
Chapter 102 813-820
Chapter 103 821-828
Chapter 104 829-836
Chapter 105 837-844
Chapter 106 845-852
Chapter 107 853-860
Chapter 108 861-868
Chapter 109 869-876
Chapter 110 877-884
Chapter 111 885-892
Chapter 112 893-900
Chapter 113 901-908
Chapter 114 909-916
Chapter 115 917-924
Chapter 116 925-932
Chapter 117 933-940
Chapter 118 941-948
Chapter 119 949-956
Chapter 120 957-964
Chapter 121 965-972
Chapter 122 973-980
Chapter 123 981-988
Chapter 124 989-996
Chapter 125 997-1004
Chapter 126 1005-1012
Chapter 127 1013-1020
Chapter 128 1021-1028
Chapter 129 1029-1036
Chapter 130 1037-1044
Chapter 131 1045-1052
Chapter 132 1053-1060
Chapter 133 1061-1068
Chapter 134 1069-1076
Chapter 135 1077-1084
Chapter 136 1085-1092
Chapter 137 1093-1100
Chapter 138 1101-1108
Chapter 139 1109-1116
Chapter 140 1117-1124
Chapter 141 1125-1132
Chapter 142 1133-1140
Chapter 143 1141-1148
Chapter 144 1149-1156
Chapter 145 1157-1164
Chapter 146 1165-1172
Chapter 147 1173-1180
Chapter 148 1181-1188
Chapter 149 1189-1196
Chapter 150 1197-1204
Chapter 151 1205-1212
Chapter 152 1213-1220
Chapter 153 1221-1228
Chapter 154 1229-1236
Chapter 155 1237-1244
Chapter 156 1245-1252
Chapter 157 1253-1260
Chapter 158 1261-1268
Chapter 159 1269-1276
Chapter 160 1277-1284
Chapter 161 1285-1292
Chapter 162 1293-1300
Chapter 163 1301-1308
Chapter 164 1309-1316
Chapter 165 1317-1324
Chapter 166 1325-1332
Chapter 167 1333-1340
Chapter 168 1341-1348
Chapter 169 1349-1356
Chapter 170 1357-1364
Chapter 171 1365-1372
Chapter 172 1373-1380
Chapter 173 1381-1388
Chapter 174 1389-1396
Chapter 175 1397-1404
Chapter 176 1405-1412
Chapter 177 1413-1420
Chapter 178 1421-1428
Chapter 179 1429-1436
Chapter 180 1437-1444
Chapter 181 1445-1452
Chapter 182 1453-1460
Chapter 183 1461-1468
Chapter 184 1469-1476
Chapter 185 1477-1484
Chapter 186 1485-1492
Chapter 187 1493-1500
Chapter 188 1501-1508
Chapter 189 1509-1516
Chapter 190 1517-1524
Chapter 191 1525-1532
Chapter 192 1533-1540
Chapter 193 1541-1548
Chapter 194 1549-1556
Chapter 195 1557-1564
Chapter 196 1565-1572
Chapter 197 1573-1580
Chapter 198 1581-1588
Chapter 199 1589-1596
Chapter 200 1597-1604
Chapter 201 1605-1612
Chapter 202 1613-1620
Chapter 203 1621-1628
Chapter 204 1629-1636
Chapter 205 1637-1644
Chapter 206 1645-1652
Chapter 207 1653-1660
Chapter 208 1661-1668
Chapter 209 1669-1676
Chapter 210 1677-1684
Chapter 211 1685-1692
Chapter 212 1693-1700
Chapter 213 1701-1708
Chapter 214 1709-1716
Chapter 215 1717-1724
Chapter 216 1725-1732
Chapter 217 1733-1740
Chapter 218 1741-1748
Chapter 219 1749-1756
Chapter 220 1757-1764
Chapter 221 1765-1772
Chapter 222 1773-1780
Chapter 223 1781-1788
Chapter 224 1789-1796
Chapter 225 1797-1804
Chapter 226 1805-1812
Chapter 227 1813-1820
Chapter 228 1821-1828
Chapter 229 1829-1836
Chapter 230 1837-1844
Chapter 231 1845-1852
Chapter 232 1853-1860
Chapter 233 1861-1868
Chapter 234 1869-1876
Chapter 235 1877-1884
Chapter 236 1885-1892
Chapter 237 1893-1900
Chapter 238 1901-1908
Chapter 239 1909-1916
Chapter 240 1917-1924
Chapter 241 1925-1932
Chapter 242 1933-1940
Chapter 243 1941-1948
Chapter 244 1949-1956
Chapter 245 1957-1964
Chapter 246 1965-1972
Chapter 247 1973-1980
Chapter 248 1981-1988
Chapter 249 1989-1996
Chapter 250 1997-2004
Chapter 251 2005-2012
Chapter 252 2013-2020
Chapter 253 2021-2028
Chapter 254 2029-2036
Chapter 255 2037-2044
Chapter 256 2045-2052
Chapter 257 2053-2060
Chapter 258 2061-2068
Chapter 259 2069-2076
Chapter 260 2077-2084
Chapter 261 2085-2092
Chapter 262 2093-2100
Chapter 263 2101-2108
Chapter 264 2109-2116
Chapter 265 2117-2124
Chapter 266 2125-2132
Chapter 267 2133-2140
Chapter 268 2141-2148
Chapter 269 2149-2156
Chapter 270 2157-2164
Chapter 271 2165-2172
Chapter 272 2173-2180
Chapter 273 2181-2188
Chapter 274 2189-2196
Chapter 275 2197-2204
Chapter 276 2205-2212
Chapter 277 2213-2220
Chapter 278 2221-2228
Chapter 279 2229-2236
Chapter 280 2237-2244
Chapter 281 2245-2252
Chapter 282 2253-2260
Chapter 283 2261-2268
Chapter 284 2269-2276
Chapter 285 2277-2284
Chapter 286 2285-2292
Chapter 287 2293-2300
Chapter 288 2301-2308
Chapter 289 2309-2316
Chapter 290 2317-2324
Chapter 291 2325-2332
Chapter 292 2333-2340
Chapter 293 2341-2348
Chapter 294 2349-2356
Chapter 295 2357-2364
Chapter 296 2365-2372
Chapter 297 2373-2380
Chapter 298 2381-2388
Chapter 299 2389-2396
Chapter 300 2397-2404
Chapter 301 2405-2412
Chapter 302 2413-2420
Chapter 303 2421-2428
Chapter 304 2429-2436
Chapter 305 2437-2444
Chapter 306 2445-2452
Chapter 307 2453-2460
Chapter 308 2461-2468
Chapter 309 2469-2476
Chapter 310 2477-2484
Chapter 311 2485-2492
Chapter 312 2493-2500
Chapter 313 2501-2508
Chapter 314 2509-2516
Chapter 315 2517-2524
Chapter 316 2525-2532
Chapter 317 2533-2540
Chapter 318 2541-2548
Chapter 319 2549-2556
Chapter 320 2557-2564
Chapter 321 2565-2572
Chapter 322 2573-2580
Chapter 323 2581-2588
Chapter 324 2589-2596
Chapter 325 2597-2604
Chapter 326 2605-2612
Chapter 327 2613-2620
Chapter 328 2621-2628
Chapter 329 2629-2636
Chapter 330 2637-2644
Chapter 331 2645-2652
Chapter 332 2653-2660
Chapter 333 2661-2668
Chapter 334 2669-2676
Chapter 335 2677-2684
Chapter 336 2685-2692
Chapter 337 2693-2700
Chapter 338 2701-2708
Chapter 339 2709-2716
Chapter 340 2717-2724
Chapter 341 2725-2732
Chapter 342 2733-2740
Chapter 343 2741-2748
Chapter 344 2749-2756
Chapter 345 2757-2764
Chapter 346 2765-2772
Chapter 347 2773-2780
Chapter 348 2781-2788
Chapter 349 2789-2796
Chapter 350 2797-2804
Chapter 351 2805-2812
Chapter 352 2813-2820
Chapter 353 2821-2828
Chapter 354 2829-2836
Chapter 355 2837-2844
Chapter 356 2845-2852
Chapter 357 2853-2860
Chapter 358 2861-2868
Chapter 359 2869-2876
Chapter 360 2877-2884
Chapter 361 2885-2892
Chapter 362 2893-2900
Chapter 363 2901-2908
Chapter 364 2909-2916
Chapter 365 2917-2924
Chapter 366 2925-2932
Chapter 367 2933-2940
Chapter 368 2941-2948
Chapter 369 2949-2956
Chapter 370 2957-2964
Chapter 371 2965-2972
Chapter 372 2973-2980
Chapter 373 2981-2988
Chapter 374 2989-2996
Chapter 375 2997-3004
Chapter 376 3005-3012
Chapter 377 3013-3020
Chapter 378 3021-3028
Chapter 379 3029-3036
Chapter 380 3037-3044
Chapter 381 3045-3052
Chapter 382 3053-3060
Chapter 383 3061-3068
Chapter 384 3069-3076
Chapter 385 3077-3084
Chapter 386 3085-3092
Chapter 387 3093-3100
Chapter 388 3101-3108
Chapter 389 3109-3116
Chapter 390 3117-3124
Chapter 391 3125-3132
Chapter 392 3133-3140
Chapter 393 3141-3148
Chapter 394 3149-3156
Chapter 395 3157-3164
Chapter 396 3165-3172
Chapter 397 3173-3180
Chapter 398 3181-3188
Chapter 399 3189-3196
Chapter 400 3197-3204
Chapter 401 3205-3212
Chapter 402 3213-3220
Chapter 403 3221-3228
Chapter 404 3229-3236
Chapter 405 3237-3244
Chapter 406 3245-3252
Chapter 407 3253-3260
Chapter 408 3261-3268
Chapter 409 3269-3276
Chapter 410 3277-3284
Chapter 411 3285-3292
Chapter 412 3293-3300
Chapter 413 3301-3308
Chapter 414 3309-3316
Chapter 415 3317-3324
Chapter 416 3325-3332
Chapter 417 3333-3340
Chapter 418 3341-3348
Chapter 419 3349-3356
Chapter 420 3357-3364
Chapter 421 3365-3372
Chapter 422 3373-3380
Chapter 423 3381-3388
Chapter 424 3389-3396
Chapter 425 3397-3404
Chapter 426 3405-3412
Chapter 427 3413-3420
Chapter 428 3421-3428
Chapter 429 3429-3436
Chapter 430 3437-3444
Chapter 431 3445-3452
Chapter 432 3453-3460
Chapter 433 3461-3468
Chapter 434 3469-3476
Chapter 435 3477-3484
Chapter 436 3485-3492
Chapter 437 3493-3500
Chapter 438 3501-3508
Chapter 439 3509-3516
Chapter 440 3517-3524
Chapter 441 3525-3532
Chapter 442 3533-3540
Chapter 443 3541-3548
Chapter 444 3549-3556
Chapter 445 3557-3564
Chapter 446 3565-3572
Chapter 447 3573-3580
Chapter 448 3581-3588
Chapter 449 3589-3596
Chapter 450 3597-3604
Chapter 451 3605-3612
Chapter 452 3613-3620
Chapter 453 3621-3628
Chapter 454 3629-3636
Chapter 455 3637-3644
Chapter 456 3645-3652
Chapter 457 3653-3660
Chapter 458 3661-3668
Chapter 459 3669-3676
Chapter 460 3677-3684
Chapter 461 3685-3692
Chapter 462 3693-3700
Chapter 463 3701-3708
Chapter 464 3709-3716
Chapter 465 3717-3724
Chapter 466 3725-3732
Chapter 467 3733-3740
Chapter 468 3741-3748
Chapter 469 3749-3756
Chapter 470 3757-3764
Chapter 471 3765-3772
Chapter 472 3773-3780
Chapter 473 3781-3788
Chapter 474 3789-3796
Chapter 475 3797-3804
Chapter 476 3805-3812
Chapter 477 3813-3820
Chapter 478 3821-3828
Chapter 479 3829-3836
Chapter 480 3837-3844
Chapter 481 3845-3852
Chapter 482 3853-3860
Chapter 483 3861-3868
Chapter 484 3869-3876
Chapter 485 3877-3884
Chapter 486 3885-3892
Chapter 487 3893-3900
Chapter 488 3901-3908
Chapter 489 3909-3916
Chapter 490 3917-3924
Chapter 491 3925-3932
Chapter 492 3933-3940
Chapter 493 3941-3948
Chapter 494 3949-3956
Chapter 495 3957-3964
Chapter 496 3965-3972
Chapter 497 3973-3980
Chapter 498 3981-3988
Chapter 499 3989-3996
Chapter 500 3997-4004

F. R. Fosberg
Book No 64

Collection and Field Note Book

No. 64

(July 1, 1962 - July 31, 1962)

(42513 --- 42972)

		Pages
Flight Miami to Jamaica		1-20
Florida		1
Cuba		2-4
Jamaica		5-11
Haiti		12
Dominican Republic		12-20
Barbados, Guadaloupe, Puerto Rico, etc.		68-74
Trinidad		
Specimens collected		
University Farm (St. George Co.)	42513-42515	22-23
Aripo Savanna	42516-42525	22-23, 28-29
East of Valencia	42526-42535	28-29
Point Chupara	42536-42542	32-35
Caroni Swamp	42543-42550	34-35
El Tucuchi	42551-42575	42-45
Trail from Maracas	42576-42585	46-47
Valencia	42586-42592	52-53
Aripo Savanna (St. Andrew Co.)	42593-42612	53-57
Arena Forest Reserve	42613-42617	56-57
Northeast of Sangre Grande (St. Andrew Co.)	42618-42620	56-57
Mt. Harris Forest Reserve	42621-42627	66-67
St. Augustine (St. George Co.)	42628	66-67
Jamaica		75-200
Road to Cane River Falls, Newstead	42629-42631	80-81
Canyon below Cane River Falls	42632-42644	80-83
Cane River Falls	42645-42650	80-83
SW of Walkens	42651	90-91
Galino Point	42653-42672	90-95
S. of Dunn's River	42652	90-91
Btwn Golden Valley & Noland Hill	42673	94-95
Eaton Hall	42674-42692	94-95
Port Henderson Hill	42693-42704	98-103
Kingston	42705	102-103
Ewarton-Worthy Pk Rd	42706-42708	102-103
Hills btwn Lluidas Vale and Croft Hill	42709-42727	106-107, 108-109
Kellits	42728	108-109
Mason River Savanna	42729-42783	108-117
" " "	42784-42785	116-117
Northeast Cay	42786-42792	136-137
Southwest Cay	42793-42801	136-139
Middle Cay	42802-42806	138-139, 148-149
Northeast Cay	42807	148
Green Hills	42808-42818	156-157
Newcastle Road, Irishtn	42819	156-157
Between Green Hills & Hardwar Gap	42820-42828	160-161
Hardwar Gap ravine	42839-42844	160-163
Ravine btwn Rose Hill & Caledonia Peak	42845-42853	162-165
Caledonia Peak	42854-42862	164-166
Mt. Horeb Trail	42863-42873	166-169
Hardwar Gap	42874-42877	168-169
Maggoty	42878-42906	168-169, 188-191
Glasgow area	42907-42912	188-189
Christiana	42912a-42918	190-191
Barbecue Bottom	42919-42927	190-193
Ramgoat Cave	42928-42939	192-195
Burnt Hill	42940-42966	194-197
South of Stettin	42967-42968	196-199
Tory Turn	42969-42972	198-199
Air view leaving Jamaica		200

F. R. Forberg
Books Vol 64

Logis = 47517

Ledger # 42972

all labels made

Standard Miniature Blank Book

No. 665	9½ x 6	120 Pages Units
No. 667	9½ x 6	200 Pages Units
No. 668	9½ x 6	300 Pages Units

Made in the Following Rulings

Journals, Day or Cash Books, Double 3 and Cts.
3, 4, Ledgers, 3 and Cts.
Double Entry Ledgers
Records with Margin Line

When ordering give Number and Ruling desired

Made in U. S. A.

A BOORUM & PEASE PRODUCT

July 1 — flight from Miami to Montego Bay, Jamaica. (Viscount - st. air)

West of Miami airport some land is cleared and grassy, with much disturbance.

Then extensive gray-brown-green area (saw grass?) with scattered greener spots and small patches of trees, mostly small and open. Roads and cultivated patches are light colored, suggesting sand.

Just west of airport the ground seems to be coral limestone.

Southward and back toward the coast a large proportion of the land is occupied by subdivisions, mostly somewhat inland. The coast itself is wooded, even swampy. Some of it seems to be cut up by streets but no houses yet.

The bay seems to be a lagoon behind a barrier island or chain of islands. Much of the bottom in the lagoon is of submerged reefs. The islands are wooded but much cut with roads. Outside the islands a shallow shelf, fairly wide, with a great complex of submerged reefs.

Off to right, thru chain of islands, Florida Keys. The edge of the shelf is abrupt, and the

1962 Cuba

Islands off north coast - narrow outer barrier with a few sand cays. Then a complex of more extensive islands largely mangrove swamps with tidal channels, ~~xxxxx~~ and patches of higher thinly wooded sand, surrounding a very shallow lagoon with irregular sand cays. These thinly vegetated.

Then deeper water, with a few small islets.

9:14 Then the coast (only slight rel development here).

Narrow mangrove and some wooded land, then patches of cultivation and much savanna or pasture with some scattered trees.

An area of more intensive

9:16 cultivation and a small patch of sand dunes (?) white patches.

Then an irregular but angular mosaic of cultivation and pasture - mostly green - soils dark purplish. Trees very sparse and irregularly distributed, narrow gallery along streams.

9:18 More relief, brownish rather than green, still largely cultivated, patches smaller, paler, sand color. Locally very light.

9:20 Plantations dark purplish

to somewhat reddish soils.

9:21 pastures, soil purplish but apparently thin over a pale subsoil - at least roads and borrow pits very pale.

(Manajibra - 75 mi. nw. of Camaguay)

9:22 red soils - large cultivated a plantation; some pasture or savanna. soil gradually darker red becoming purplish,

9:23 more and more in plantation still some large blocks of savanna. Some seem to be pineapple plantation, from color, but possibly not. rectangular pattern.

Then swamps.

Then an irregular flat mosaic of burned area, scrub or semb forest & savanna.

9:26 South coast, with a narrow belt of coastal forest.

9:27 A series of small islands. wooded, one seem to have mangroves in interior. all have some ponds.

9:28 A larger very irregular island, mostly mangrove, with white sand beaches and ridges. Then a whole complex

of islets and a very
irregular barrier island
with mangrove on the inner
(north) side, a beach and
beach ridge on outer side.
9:30 A patch of rather shallow water,
greenish, but mostly a dull
blue, not the deep blue of the
Pacific tropics.

9:33 Three more islands,
and others westward, forming
a chain. Interiors mostly
mangrove, some patches of
bright sand, apparently
grassy (brown). Islands
surround by beaches
and beach ridges.
9:34 A scattering of tiny sand
cays on submerged reefs.
Some vegetation.
9:38 More extensive islands farther
to right and one almost on
course. Mostly mangrove
with peripheral sand ridges
a large reef complex forming
an atoll like structure,
but rather irregular,
surrounding a lagoon.
Most of cays are mangrove
9:39– Another complex perhaps
41 a part of a general barrier
but many mangrove cays
and a few sand cays and a

shallow reef with
submerged "tidal" channels
surrounding a lagoon
with a brighter green
bottom (Thalassia?).
Then abrupt dropping
off into deep blue waters.
10:12 Entering Montego Bay, Jamaica.
Hills on E. S. & W. sides irregularly
wooded, much shifting
cultivation and clearing.
S. of bay a complex of
mangrove islands.
Off airport a good coral reef
Hills S. of airport wooded,
some clearings and houses
on west part.
10:16 Landed at Montego Bay airport.
Plants seen
Delonix regia
Cyperus obtundus
Chloris inflatus
Cynodon dactylon
Paspalum conjugatum
Catharanthus roseus
Hibiscus sp. rosa-sinensis
Casuarina equisetifolia
Cocos nucifera
Tidal flats, mostly bare, some
with scattered small mangroves,
around air strip.
Reefs to east are very narrow;
water deepens very rapidly.
Left at 10:47 for Kingston

Coastal strip very narrow, hills begin almost immediately. These are karst-like, with scrub & scrub forest, green, cultivation on more gentle slopes and hollows between hills.

~~Southeastward the~~
Eastward the karst becomes less pronounced, more flat ground, less hills - the hills still covered by spontaneous vegetation but this more savanna-like.

10.53 Karst again becomes more abrupt, hills densely wooded. Visibility becomes poor because of clouds.

10.55 In breaks in clouds a striking karst, all wooded, no significant amount of ground level enough for any sort of cultivation.

10.56 crossed a dirt road.

Shortly afterward, another and a village ~~with~~ in a broader valley, still karst, some clearing.

Then an intricate mosaic of clearing and tiny abrupt wooded hills with flat ground between them, but very narrow. Some scattered settlement here, soil red,

but general aspect green.

10.59 Flat intervals become somewhat wider, more settlement, more roads, but clouds very thick.

11.01 A wider flat valley with a more important road briefly paralleling course. Villages. Red badly eroded ridges perpendicular to course.

11.02 Rather thick settlement along a network of small roads.

Some savanna area, but landscape (so far as can be seen through cloud) still karst-like, but not so abrupt.

11.04 Drainage now dendritic and ~~rocks~~ vegetation mostly a green savanna, with some cultivation, relief still sharp.

11.05 becoming more wooded but still largely open, with network of roads on ridges, houses numerous along these. Clouds.

11.06 Topography gentler soil very red. General color green - mosaic of pasture, scrub, cultivation savanna.

11.07 Some tendency to karst.

11:02 Plantations and mangrove.
A fair sized city.
More plantations.
A wide flat river valley.
River somewhat meandering, lined with narrow gallery.
11:09 Flat plain, all in sugar and banana plantations.
11:10 Area of dunes(?) then coastal mangrove and mangrove islets around Kingston Harbor. Thin rather muddy green. A few poor reef patches.
Kingston Airport on a flat peninsula south of city.
Plants seen
Cynodon dactylon
Cyperus rotundus
Ex Panicum maximum
Bougainvillea glabra
Codiaeum variegatum
Nerium oleander
Agave americana
Hibiscus rosa-sinensis x schizopetalus
Casuarina equisetifolia.
12:12 Left Kingston for San Juan, P.R.
Lagoon south of airstrip lined on one side by mangrove, inland an islet or peninsula is an apparently deciduous scrub with scattered Casuarina forming dark spirelike emergents (possibly not Casuarina) (Cactus?) (or both)

Causeway to shore ends in a horrible treeless subdivision.
A small valley on the south coast, east of the causeway, is scarred for quarrying.
Middle slopes of mountain are wooded, upper slopes mostly open - possibly gleichenia.
Lower slopes covered by green scrub, with scrub-forest at foot in ravines.
12:07 Crossed an alluvial fan in a valley mouth - evidently a wide bar gravel dry river bed
12:08 Mountain slopes are a mosaic of clearing, grass, and scrub. This is the coastal range. The next one inland has more clearing and less scrub. The coast range are patches of larger forest in ravines and a few on hill tops.
Clearings (recent) show a white appearance - rock?
17:11 Crossed a valley with a wide, braided gravel river bed. Valley bottom in bananas and pasture, some coconut plantations.

Coconuts abundant on
lower coastal slopes
12:13 a small bay - slopes here
mostly in coconut patches
of scrub. A small mangrove
swamp at head of bay.
East of this a mosaic of
cultivation and scrub + pasture
Along coast some swamp
areas - mangrove, the first
of them a dark gray - apparently
burned recently. Next one
green.
The general landscape
of this ~~eastern~~ peninsula is
green. The ultimate
peninsula is wooded except
for some savanna on the
distal lobe. (Monnant Point)

12:55 Opposite south point of sw.
~~of~~ peninsula
of Hispaniola.
This is brown, with wooded
ravines.
In distance a bare white
river bed comes down to the
sea.
On the peninsula a small
mangrove swamp and small
lagoon back of a festoon
of barrier islands.
Large island east of
peninsula - west ~~boot~~ last third dry
and brown, wooded only in

ravine, eastern third
wooded.
North of it a barrier
reef encloses a large
~~sea~~ lagoon
The eastern leg of
this barrier reef, running
straight N-S. is wide.
A conspicuous surf is
breaking all along east
side. No cays on east side
but one small one on lagoon
side.

For some distance the
south coast of Haiti
is in view but too far
away to see much of its
vegetation. It ~~is~~ generally
slopes rather steeply to the
sea - seems to be brown
rather than green, to
have the aspect of scrub
and savanna, rather
than forest.

1:34 The coast swings south
The slopes ~~are~~ are brown,
seem to be mostly
savanna with small
patches of wood. Well
inland it seems to be
forested on the mountain
slopes.

1:26 At ne point there is a town at the mouth of a valley, or an alluvial fan A road goes directly inland.

Southeast of this, along the coast is an extensive barren area, apparently dunes with scattered vegetation - very pale tan. Bright-red soil just inland, and an extensive plain with open scrub & irregularly mottled with small patches of savanna. The plain gradually slopes up to the low hills inland and irregularly, the forest becomes more closed, but large patches are still open, some even verging on savanna.

1:30 cows

Large lake in the distance to ~~right~~ left.

Some relief, low gently hills, completely forested except for a few small clearings on the inland slope. This forest extends west to the mountains south of the lake which have a band of savanna from half ~~[illegible]~~ way up to near the top. Tops heavily wooded.

1:33 Next range of hills ~~[illegible]~~ inland is mostly cleared, a mosaic of shifting agriculture, with more wood up the slopes and on the higher ridges mostly forest. East slope almost entirely cleared and in shifting agriculture down to coast. Mostly green, through some pasture.

Inland in distance a large plain, s. e. of lake mostly in sugar plantation.

Dry reefs along the coast.

Interior of this south peninsula is a mosaic of clearings and wood, perhaps predominently woods.

At head of bay in distance to left is a triangular savanna or bare delta-like area occupying north half of plain back of bay. South half irregularly wooded.

Range of mts just s. e. of this bay densely forested, or south slopes, anyway.

Beyond this a dry plain,

1962 Dominican Republic
mid half

apparently mostly savanna, but distance too great to see last half of this apparently a dry scrub. Perhaps the savannas plantation, as there is a rectangular pattern of roads, this also extending into the scrub part.

Inland the mountains are steep and largely wooded.

Head of large bay seems to be generally wooded.

East of it coast swings south again and becomes dry, brown, and a mixture of savanna and scrub.

Eastward becoming more dominantly scrub. A large braided rather large river bed coming down out of mountains and swinging west to mouth on a peninsula.

South of this a fish-hook like peninsula enclosing a lagoon - seems sandy, patchy grass, partly thin woods, a cleared area on inside coast of hook - sandy.

East of this a flat coastal plain - perhaps in sugar. Dull color rather drab, rectangular pattern of roads.

Broad coastal area and

flat valley mouths east of this - a mosaic of cultivation & small patches of wood, some large sugar plantation(?) areas, eastward to a small point scrub seems to be dominant.

Then coast swings sharply northeast - rather flat, some plantation(?) some scrub & forest. Visibility poor. Distance becomes too great.

1:52 Peninsula east of Santo Domingo is wooded. East of it a coastal strip, rather wide, is wooded, but inland a large area is either savanna or sugar cane - or the most to be sure. Probably cane.

Around a large river mouth east of this a considerable wooded area and back of it large areas of sugar cane(?)

2:07 Small island off coast - almost entirely wooded. East of it, savannas, plantations and some woods.

On island several small roads running in from or inside from a triangular clearing

1962 ~~Haiti~~ Dominican Republic.

7:09 coast swings south and land east of it is flat and forested, only a few small clearings.

A large peninsula along south shore a strip of dunes(?) just back of mangroves along shore.

Large island separated by a shallow strait filled with coral reefs. This island all wooded ~~so~~ except for a few tiny clearings, very flat too what look like salt pans, light brick red in color.

Along east coast of pines a low scarp back a little from the beach.

East of this, another smaller but similar peninsula, also wooded, with a scarp back of sandy shore, changing to a low sea cliff on east side.

At base of peninsula a similar scarp runs eastward a short distance, parallel to and back from shore. Remnants sea eastward. Then east of this a similar flat wooded plain extends to east end of island

fringing
some reef along south coast of east peninsula, also along southeast ~~coast~~ shore. Thinning to southeast, a pale green inland lagoon back of northeast shore.

These plains are probably raised reefs but the texture of the vegetation is unusually fine and even - dark dull green. Shows no evidence of disturbance except the few tiny clearings.

7:35 reaches W point of Puerto Rico.

7:36 Cultivated down to the beach, except for a very narrow strip of dunes, on the part that bulges most to north. ~~Town~~ Some orchards - citrus?

Fringing reef very narrow.

7:46 Crossed a low flat peninsula again cultivated to the beach. A black sand on it

Also a swamp back of a small bay. Much grey pasture east of this, and a village then - coconut grove and swamp at southeast corner.

7:54 San Juan.

Bight of airport on a lagoon with a good mangrove swamp on its north side.

Las Jaras airfield
Plato sea.
Cyrtanthera equisetifolia
Setcreasea purpurea
Murraya paniculata
Codiaeum variegatum
Acalypha wilkesiana
Thuja obtusa
Alpinia purpurata
Thevetia nobelensis
Bolbophyllum guttatum
Dryopteris sp.
Pennisetum cinereum
Rhoeo spathacea
Catharanthus roseus
Ficus benjamina?
Heimlapsus annua
Cycas circinalis
Ficus aurea
Polyscias guilfoylei (dissecta)
Cocos nucifera
Polyscias fruticosa

[illegible] Culebra Island - largely deforested - old fort can be seen from distance.
Small islets to east of it
3:57 St Thomas, suburbs
Green, mostly wooded.
(cloudy)
[illegible] St Croix
generally wooded, almost

no flat ground.
Reefs very narrow,
mostly in bays
Shape extremely
irregular.
Spurs truncated,
with low sea cliffs.
These mostly bare.
A similar large island
& immediately beyond
A chain of small
islands & islets
to its east.
These all same shape & low
sea cliffs. Reefs not prominent.
5:00 Lighted & high islands
far to the left
Large one is Dominica.
5:17 Martinique - completely
cloud-wrapped except a
small hole or two through
the clouds - slopes of
Mont Pelee largely grassy
forested ravines, cleaning
& bays -

Back of city [illegible] is bare
is mainly cultivated land.
some mangroves at head of bay.
A number of villages, small
asphalt air strip.
Southward land becomes
more intensively cultivated -
plots small and irregular.

separated by hedges - very few small bits of flat. houses numerous

5:23 Another small bay just before south end of island

Several lagoons at south w some barrier islands and reefs, but not well developed.

5:26 Another island to left, but not very visible. (Windward) No detail visible except very irregular outline.

5:43 North point of Barbados on left.
Too dark to see much.

Sloping plateau with sharp, deep ravines. Many small villages. Land almost completely cultivated. Close network of roads.

Development all along south coast & on ship on east side.

7:47 Lights of Tobago on
(8:47) left.

1962 Trinidad

July 2 - University Farm, Champs Fleurs, St George Co

~~weed in~~ ~~cultivated~~ ~~plot~~

42513 Cleome rutidosperma — ~~flow~~ bud white.
in cultivated plot.

1 14 Mitrotes debilis — flowers white.
weed in edge of pasture

2 15 Voyrezia subterranea
planted in museum plot

Aripo Savanna.

July 3 - Just north of Cumuto, south east of Arima. St. Andrew Co. 35 m.
in open wet savanna
on gray silt.

2 16 Chrysobalanus icaco var. — shrub 1 m. tall,
common, scattered — flowers white.

1 17 Spermacoce capitata — erect, flowers white.
common on roadside

1 18 Fauvagesia — stems depressed to ascending,
common — flowers greenish white.

1 19 (sub) Perama hirsuta Aubl. — erect, flowers yellow.
common

1 20 Spiranthes — erect, flowers white.
occasional isolated

2 21 Rhynchospora barbata — Tufted
abundant

2 22 Cteniums — loose tufts.
very common

in edge of island of thicket
in wet savanna, on silt

1 23 Cassytha filiformis L. — stems greenish, turning
occasional — yellow. flowers white, fruit green.

1 24 Scleria bracteata Cav. det. Strong 1980 — tangled scabrous vine
abundant

To p. 28

1962 Trinidad

July 3 – Trip to Aripo savanna

Lowland vegetation is a tangled forest with a large component of palms esp. Euterpe, locally Bamboos is dominant. Cecropia frequent. Bamboos persist from commercial plantation

Large open area once Arima is old U.S. airbase. Mainly grassy (andropogon sp) but with scattered trees and thickets of various sizes.

Under Aripo savanna (3-4 feet)

Open area of thin grass on wet very fine sand & silt, grayish pink in upper 1½ dm, then dark gray, then mottled with red. The red branching in nodules & concretions, the 4-6" underlain by clay. The mottling will darken to brick red concretions when exposed to air

Scattered shrubs on a thin low grass largely Rhynchospora and Cleistanthus, Paspalum, to

A patch of tall thicket in the savanna is on ground perhaps a few inches higher, a soft gray silt that seems to be cracked into polygons by cracks at couple of inches or more wide polygons hummock like. On this is a growth of Mauritia mixed with tall & short trees of various broad leafed sorts. Undergrowth of Bactris and various shrubs.

Edge is a band of Scleria sp, an awful saw-grass type, climbing through shrubs, on the ground is a rather luxuriant glabrous Creeper Psedum.

Road s.e of Valencia

Swamp forest, with broad channels and hummocks, flooded part of year, but not at present. Soil a gray silt, underlain

This forest is largely palms of several sorts, Myristicaceae, and various other broad-leaf trees. Undergrowth 3-5 m. tall of shrubs, small palms, etc. Ground large ~~l~~ in a more high of spreading palms.

Little vegetation in channels, mostly on hummocks.

An enormous sedge common, as well as a small one - leaves of the large one almost Pandanus like 2-3 cm a more wide, up to 3 m or more long, sterile.

Desmoncus occasional.

Aroids not very common.

Lianas fairly common, some epiphytes. - bromeliads

lichens

4 25 Coccocypselum
2 abundant on ground

decumbent to ascending, flowers purplish; fruit bright blue.

July 3 - just east of Valencia 30 m.
St. Andrew Co.
in swamp forest with many palms

1 24 Palicourea
along narrow road
low shrub, thyrse red; corollas dull orange-red.

2 27 Spermacoce
along narrow road
erect; corollas white.

2 28 Cyperus:
common on large hummocks

2 29 Hecistopteris pumila
abundant on trunks of Manicaria saccata.

3 30 Cephaëlis tomentosa Willd.
common along road
1 m. tall; bracts scarlet, flowers pale yellow.

2 31 Palicourea
occasional along road
shrub 0.8 m. tall, flowers whitish, thyrse green, turning bright purple in fruit.

2 32 Lacistema
rare along road
slender tree 4 m. tall; fruit maroon.

1 33 Calliandra guildingii Benth.
occasional along road
shrub + stamens bright red.

3 34 Isertia parviflora Vahl
occasional along road
shrub 3 m. tall; corolla pale pink, tube darker.

2 35 Palicourea
occasional along road
shrub 2.5 m. tall; thyrse green, fruit black when ripe.

July 11 - ~~Lookapoo Rd.~~, Blanchisseuse Pass.

1300 - 1900

Ridge top forest locally fairly undisturbed. Trees 20 - 25 m. tall up to 5 dm dbh. mostly 2.5 - 3.5 dm. Canopy almost complete, rather uneven, no second tree layer. A shrub layer 2 - 4 m. fairly well developed, a lower one 1 - 1½ m. also 2 - 4 m layer largely geonoma palms, some bloodleaf Dicots.

1 - 2 m. layer gingeberaceae, tree ferns, palms, rubiaceae, Heliconia, Marantaceae, some dicots, Chusquea.

On ground a rather sparse cover of seedlings a few ferns, etc.

Many lianes & tree trunks - aroids Philodendron, Monstera, some dicots.

Many epiphytes - orchids, ferns, bryophytes on trunks, branches, leaves.

On top of ridge, ~~and~~ highest peak, a clearing, and around this some disturbed, apparently previously cleared area. Clearing mainly extending down the south slope rather than the north. Disturbed area thickly grown with Chusquea, with a few trees.

The valley up which the road goes, or the south slope of the range is almost entirely cacao plantation with some native trees as shade. Only near the top is there any native forest. This is real montane rain forest.

On the opposite side, except for a little cacao and coffee right near the top, the forest goes down to a fairly low altitude - but with the larger trees fairly well logged out. Vegetation is abundant.

At low altitudes coconut is dominant, all along the coast westward to Chaguaramas Point, at least.

strand plants
Wedelia trilobata
Paspalum distichum
Cocoloba uvifera
Cyclea sp.
Bidens radiata
Terminalia catappa
Cyperus sp.
Scaevola plumieri
bromeliad
Clusia rosea
Lapot.
Ficus sp. ampelophaea

July 4 - Point Chupara, west of Blanchisseuse, Mt. Tocco Co. 4 m

42 53c Piteairnea
1 abundant on rocky bluffs above sea beach

July 4 - Blanchisseuse Pass, Northern Range west of Morne Bleu, Mt. Tocco Co in montane rain forest on ridge tops. 500 m

3 37 Cephaelis
occasional

3 38 Peperomia
epiphytic on tree trunks

2 39 Adiantum
common, terrestrial

sand flat back of beach - planted to coconuts, but these mostly young. Wedelia and Paspalum dominant - Forespecies of Cocoloba.

On rocky bluff - Piteairnea, Wedelia, Clusia, Rubiaceae, Malvaceae, Calliandra, Ficus

flowers scarlet.

shrub 1 m. tall; flowers white, fruit purple. - bracts white.

climbing, rhizome close to bark of tree

rhizome creeping, young brand pinkish.

42540 sedge
2 common
2 41 fern
common
3 42 Cephaelis
occasional

July 5 - Caroni swamp
along old canal in
~~sec~~ Rhizophora swamp
3 43 Rhizophora
abundant
2 44 Rhizophora
abundant
2 45 Rhizophora
~~colonies~~ abundant
2 46 Rhizophora
abundant
1 47 Laguncularia racemosa
common, especially
toward head of canal
1 48 Rhizophora
abundant
1 47 Cyperus articulatus
locally abundant in
open marshes
1 50 Digitaria
seasonal on muddy fill
near bridge

scape erect.

shrub 1.5 m. tall,
fruits lavender.

0 m.
Caroni Co.

tree 5 m. tall, flowers
pale yellow, 2-4 in an
inflorescence.
small tree, buds green.
small tree, ~~flowers~~
buds pale yellow.
small tree; flowers
pale yellow.

shrub 2 m. tall;
corolla white.
small tree; buds green.

erect, ~~bushed~~
several stems from base

1962 Trinidad

July 5 - Carroll towards trip by boat

Inland end of canal - Rhizophora mangle, Laguncularia racemosa, Avicennia.

Cyperus ligularis.
Philoxerus vermicularis
Paspalum distichum in
Thrangs or mud a few
dm above water level -
Avicennia more common
in these flats than along
channel.
Several wines in openings

Aerial roots on Rhizophora
hanging even from highest
branches but most abundant
just above high tide level.

Westward Rhizophora
becomes completely dominant
along channel.

Well toward west the
general height of the trees
is 6-10 m., mostly Rhizophora
slender, max. 10 cm dbh. mostly
much less. Trees perhaps smaller
on north side.

Large flocks of scarlet ibis
(Red Returning of roost K.S.)

Quite a few other kinds
of birds.

Off to south of canal
are large areas of open water,
with islands and borders
of mangroves.

Going landward the
proportion of Avicennia
and Laguncularia steadily
increases.

One type of Rhizophora,
rather uncommon has
red radicles

Large area of marsh
on south side toward head
of canal.

1962 Trinidad

July 4 - Trail up Mt. El Tucuche
Lower part through cacao plantations

main ridge from saddle west to El Tucuche
Slope, just west of saddle, covered with montane rain forest up to 25 m (-30) trunks to 4 (5) dm dbh. Canopy uneven, more or less closed, layering not very distinct. Various intermediate sized saplings & small trees, a few small palms. Third layer 1-2 m. prominent. On ground Adiantum common on ground, much bare ground, covered by leaves, sedges, seedlings, bryophytes on ground. ~~Lichens~~ Lianas (aroid) common. Marcgravia. Epiphytes, mat of ~~4~~ at least 4½" deep. Measured a place - 27" + 15" to bedrock. Q slender Cyathea occ. Trees of Idm + about 2-5 m. apart.

Weinschenkeplia aphyllo saprophytic orchid beside the path.

Going up the mountain the forest the spacing becomes close, the stature lower. The ground layer and the shrub layer become very dense. Epiphytes become more abundant.
Finally, on the ridge there is a dense scrub about 1-3 m. tall.
Summit is a dense grassy spot, with such weeds as Sonchus, Borreria, etc.

In the ridge-top scrub or elfin forest Melastomaceae are abundant, Vismia, Ternstroemia

Tallest trees perhaps 6 m. tall, general average perhaps half that, rapidly becoming more on west slope, lower on east slope.
Cleared banks and sides of trail covered by abundant Selaginella (also shown in forest below along trail).
Bromeliads, ferns, epiphytes and terrestrial, are well represented, aroids mostly

great leaves climbing on trees, all very common. The whole a tangled mass with Chusquea, small palms, occasional emergent trees, some Selera.
On the east slope a tangled mat, 1-2 m. deep, of Gleichenia, etc. with occasional emergent palms and other small trees.
In front a dense undergrowth of Cyclanthaceae and a palm that looks like Carludovica, with shoots of Palicourea, etc.

On west slope just below summit ridge there are larger, well bedecked with Bromeliads, Clusia, etc. Clethra grows to tree size

1967 Trinidad

July 7 - South slope of El Tucuche, St. George Co. - in montane rain forest

4/2	51	Grammitis serrulata on roots of tree along trail	serrulata
2	52	Psychotria sp. nov. ined. det. Steyermark, 1977 occasional	erect, unbranched shrub, m. tall, fruit red.
5	53	~~Trichomanes~~ Hymenophyllum on bank above trail	hirsutum (L.) Sw.
1	54	Trichomanes crispum det. Lellinger, 1978 on bank above trail	Lellinger, 1978
1	55	~~Blechnum~~ Teliostachya alopecuroides (Vahl) Nees along trail	det. D. Wasshausen

July 7 - main ridge of Northern Range just east of El Tucuche (ind. 4255-3-5) St. George Co. in montane rain forest.

950 m.

2	56	(Sedge) on ~~open~~ open bank along trail	
3	57	Trichomanes trigonum Desv. var. on bank along trail	fimbriatum (Backh.) Proctor
1	58	Hymenophyllum on tree root along trail	
1	59	Grammitis serrulata on tree root along trail	
1	60	Woodwardia aphylla rare on bank with humus along trail	white
2	61	Borreria verticillata common along trail	flowers white
1	62	Marsdenia subacaulis (Griseb.) Urb. common on wet cliffs	leaves appressed to rocks, flowers lavender.

1962 Trinidad

42563 Trichomanes pinnatum Hedw.
4 abundant on mossy bank
1 44 Trichomanes crispum L. FRONDS
common on rock pendent erect.
2 45 Cococypselum

July 7 - summit ridge 1000 m.
of El Tucuche, V. Gorge Co.
in wet dwarfed ridge- To 15 ft scrub
1 46 Tournefortia eggersiana small tree; fruits
occasional (eggersiana) pendulous, fleshy,
black when ripe.
47 Tournefortia eggersiana small tree, staminate
occasional
2 48 ~~Bourreria verticillata~~
1 68 Grammitis ["Xiphopteris"] taenifolia (Jeum.) Proctor
on base of tree trunk
1 69 Utricularia alfinis Jacq. tubers translucent,
flower white
shading to pale yellow
within.
2 70 Nephrolepis ~~cordifolia~~ circularis (Vall) Matt. ex King — fronds erect
epiphytic on tree trunk
(others terrestrial)
3 71 Clethra baldwiniana small tree (others to 20 m.)
1 71a occasional
2 72 Oleandra trinitensis Maxon det G.R.P. Chusquea
rare, on tree trunks along trail, climbing
2 73 Vismia
occasional
rare - grassy summit 1000 m.
1 74 Trimeria cf. martiniquensis flowers yellow
occasional
2 75 Bourreria verticillata erect; flowers white.
common

1962 Trinidad

July 7 - trail from Maracas to top of Northern Range - along trail in Cacao plantation

42576 Phyllanthus
common

1 77 Wedelia
rare

1 79 Boreria laevis (Lam.) Griseb.
common

1 79 Thelypteris dentata (Forsk.) E.
very local

1 80 ~~cumbed~~
occasional, edge of clearing

1 81 Sclaria
edge of clearing

1 82 Polypodium astrolepis Liebm.
epiphytic on cacao branches

1 83 Polypodium polypodioides
common, epiphytic on Cacao branches

1 83a Peperomia
epiphytic on cacao branches

July 7 - trail about 1 mile below Maracas Falls, 1st roadside

2 84 Boreria laevis (Lam.) Griseb.
common

1 85 Phyllanthus
common

H. George
175 m.

radix (branchlet) notably thick.
flowers yellow

St. J.
sensu lato

flowers white, corolla lobes pubescent within.
fronds erect.

100 m.
George Co

(Graf)
det. Peperomia rotundifolia (L.) Kunth Guido Mathieu Nov. 2005

flowers white; corolla lobes pubescent within.
erect, unbranched, D 0.8 m,
flowers reddish.

July 8 - Aripo savanna
(photos (finished roll 62-1) (pict. a bit overexposed)

A large area of savanna with very few woody plants, showing much evidence of burning. In most parts there are mounds of gray silt about the size of gopher mounds. Very compact. Will support one's weight. The channels between them are wet and oozy. They give the impression that there is a water-filled cavity beneath them as water oozes from several places along the channel when it is stepped on.

The woody vegetation around the savanna and in islands in it shows dead places around the edges, a plant that are partly dead, doubtless resulting from recent fires.

Forest around savanna has a strong component of palms, both in canopy layer and in undergrowth. Canopy very irregular and

incomplete; there are few large trees and trails are open into the forest.

Undergrowth of palm seedlings, small palms, large sedges, Melastomaceae, rubiaceae, other broadleaf shrubs and saplings. In some parts trees with stilt roots, probably mostly Clusia, are common. Many lianas. Ground is rather humid but not as much so as in forest examined on July 7. Edges almost impenetrable, farther in much more open. Spacing averages perhaps 5 or more meters.

In savanna itself here very few woody plants. Both physiognomy and composition variable. Trace of fire very obvious in savanna. Clumps of sedge-like to bare, sending up tufts of leaves.

Plan on mounds differs significantly on mounds and on channels. Lycopodium on mounds.

In the area studied on July 7 the channels make up a coarse network, mostly trending in one direction. In places a partly broken down tubular tumor is evident. Channels marked by denser vegetation

July 8 – The fore-hills of the Northern range are fairly clear in the western half, more and more wooded eastward.

Probably these hills are today for cacao planting, they are said to be burnt each year.

July 9 Large areas at the base of the Northern Range are pasture and miscellaneous cult. The central part of the plain is a vast area of sugar cane with a few scattered trees, rows along secondary roads etc.

East of the an area of coconut plantation - rather sparse, much replanting.

Then open country, some pasture, some sugar cane. (probably all in cane at some time or other.)

Then suddenly, just before mp. 17, the flat country becomes wooded, but many open areas in it. In places predominantly open. Much bamboo. Jacaranda common. Bamboo said to be spontaneous

From a mile or so before Cumuto Rd. the landscape is a mosaic of savanna (or at least open cleared land) and thickets and patches of poor forest, patches of bamboo etc.

Cecropia, Lagerstroemia speciosa, Inga (?) common. Guava.

The eastern half of the Northern Range appears to be wooded to base.

Beyond Valencia local plantations of Calophyllum sp. but mostly a ragged secondary forest, palms abundant, locally dominant. Few large trees left.

Gradual change to thickets & considerable clearing, some areas still rather densely wooded.

Sangre Grande. Fair sized city.

Beyond - some citrus orchards.

July 8 - ~~Lopinda~~ just south east of Valencia. St. Andrew Co. in swamp forest

30 m.

4 2 586 Laleria
occasional in undergrowth especially at edges of forest
climbing extensively branched. lanceous "sw-grass"

2 87 ~~Tab~~ ~~Hatea~~ Amaioua corymbosa H.B.K.
Amaioua
fruit reddish black

2 88 Ilex
flowers white.

3 89 Mapania?
common on hummocks
erect.

1 90 ~~Hatea~~ Amaioua corymbosa H.B.K.
occasional
slender shrub
flowers white.

1 91 Hirtella
rare
- tall slender shrub, racemes pendent flowers blue-lavender, - stamens maroon.

4 92 ~~Lon~~ Oleandra articulata (Sw.) Presl (1 to Prosth).
very local
epiphytic. rhizome woody ~~stipes~~ climbing on tree trunk.

July 8 - Aripo Savanna St. Andrew Co.
35 m.
open wet grassland on gray silt soil.

4 93 Thelypteris
in low grassy wet places

1 94 Lycopodiella
occasional in moist places

2 95 Aeschynomene sensitiva Sw.
occasional in wet places
flowers yellow with dark red-brown markings
roots very spongy.

2 96 Sauvagesia
common
- petals white ?

42597 Buchnera — leaves purple beneath;
occasional — corolla rose pink.
culm erect, head white.

3 98 Rhynchospora
occasional

2 99 cladium?
abundant (mostly not flowering) culm erect

42600 ~~abundant~~ Juncus
abundant, especially
in shallow pools.

3 01 Panicum
generally abundant

1 02 Polygala appressa Benth.? plant purplish,
occasional — flowers rose purple.
stems brittle, closely
appressed to soil,
leaves mostly on ~~top~~ side of stem. (stalk)

1 03 Lycopodium carolinianum — leaves and culms erect.
occasional, on silt
mounds formed by earthworm castings

3 04 Paspalum
abundant generally

2 05 Panicum millegrana — culms decumbent &
common — ascending.

2 06 Rhynchospora — culms erect, solitary.
occasional

1 07 Polygala timoutou Aubl. plant purple, flowers
rare, in edge of small pool — purplish green

1 08 Utricularia — flowers white with
common in dense grass. — yellow median mark on palate.

1 09 Utricularia — flowers bluish with
common in dense grass — yellow median mark on palate.

2 10 Drosera capillaris Poir. Poir. — plant reddish, flowers white.
abundant on bare mud
and in water

11 Xyris flower yellow.
common locally in thick grass

4 x 12 Dioclea rare in dense grass — erect, flowers white.

July 9 – Arena Forest Reserve, about 2½ miles west of Cumuto

2 13 Paspalum longiaetum abundant on wide shaded path in forest

3 14 Pisonia eggersiana Heimerl rare — slender shrub 2 m. tall

2 15 Trema micrantha (L.) Bl. in cleared area in forest — limb of perianth reddish. slender shrub 2½ m. tall.

4 16 Ryania speciosa occasional in thinned forest — slender shrub 3 m. tall.

3 17 Hypnaceae common along trail

July 9 – 4 miles northeast of Rancho Grande, St. Andrew Co. in dense high rain-forest dominated by Mora

1 18 Schizaea elegans (Vahl) Sw. infrequent in fore-flora

3 19 Jussiaea foliobracteata Munz locally abundant in disturbed muddy place along logging road — shrub 1.5 – 2 m. tall, petals yellow, notably clawed.

3 20 Palicourea in semi-open place along logging road — shrub 1.5 m. tall, thyrse scarlet.

1 s.s.i. n.e. of Sangre Grande
Beyond Oropuche R.
Some tall forest - Mora.
Palms not abundant.
Mora trees reach 150' tall.
3-4' dbh.
A few interfl.
Beyond this forest has been destroyed - clear cut.

Mora forest - partly logged.
Larger trees with very conspicuous buttresses up to 4-5 m. high. Apparently the entire canopy layer at 30-40 m. is Mora.
Scattered second story trees of several species. then an almost pure layer from 0.5 to 3 m. (6 m.) of Mora seedlings. a few scattered palm seedlings Marantaceae locally common, or abundant on ground.
Locally a few sedges (Hypolytrum?). Really large trees 80-100 m. apart. Those over 1 dm. 3-10 m. apart.
(photos on 62-2 after sssssss)

Great mounds of litter against the bases of trees, between the buttresses.
Surface of ground irregular, with pits and some hummocks. Litter on higher parts only a few cm. thick on gray soil. In pits to 1 dm. on gray soil.
Large Moras loaded with bromeliads, aroids, high crotches, also Philodendron.
Clusia, Ficus (?) sending large roots down, aroids sending masses of small roots. (photo)
Very few true lianas but occasional enormous ones (photo)
Very few ferns on ground even less as epiphytes. Lichens & Hepatics, thin but abundant on tree trunks, mosses less common. Some leaf & epiphytes on older shrubs.
Locally the shrub layer, mostly Mora seedlings, some other shrubs, (Guttifera sub. fl.) is really closed.

1962 Trinidad

In undisturbed Mora forest, Lacon (pers. com.) the Mora would be even more dominant and undergrowth thinner.

Here the canopy is not quite complete and the thinner it is the denser the shrub layer.

The pits called "hog wallows" are not very satisfactorily accounted for, though they blame burrowing by earthworms.

The soil is a fine gray sand, quite deep.

Mora said to be deep rooted.

Forest bromeliad locally on sands.

July 8 - Arena Reserve
2 mi. W of Cumuto.

Forest being thinned to a shelterwood, 20-30 medium trees per acre. To promote natural regeneration.

Part of this is 20 years old. 25± m tall, trees to 20-25 cm dbh. A very dense understory 5-7 m tall. Canopy not closed. Where no thinning has been done the canopy is almost closed but trees mostly about 8-15 m tall.

July 10 Brigand Hill

weeds in Cedrela plantation.
Melicoria
Bidens
Gongalaquinia.

Clearing to establish Teaks - best time in December.
also for other sorts of planting

3 photos of young Teak observation

1962 Trinidad

Mt Harris area. -

Teak is base from ~~Feb~~ Jan, through ~~April~~ May 4 months without base

(length depends on dryness)

Teak shades almost everything out - ground is bare. This is perpetuated by annual burning - this not deliberate but accidental. Effect erosion here is conspicuous - columns of earth 2-(and 3) feet or more as I ~~under~~ under high when protected by a stick or even a leaf

A few teak seedlings here and there also clumps of stump sprouts from thinning. But this seems not very effective.

Some natural shelterwood regeneration in wet areas.

4 years old about 10-15 m tall 15-20 cm dbh.

very clear poles.

this on sandy soils teak on clay. Teak does well on sand.

Brickfield (Brothers Road) in Central Range Reserve (let 3 of 4 000 acres of teak)

a nature reserve of 140 acres around rest house (Aquivel - Mouse Spaciation)

Another nature reserve near Hanuman's Corner on sandy ground.

Ornamentals + other plants noted

Peltophorum ferrugineum
Cyrtostachys renda
Cordiaeum variegatum
Theobroma cacao
Citrus sinensis
Zea mays
Coffea robusta
Artocarpus altilis
Leguminosae indica
L. speciosa
Cassia siamea
Cordyline fragrans
Manihot esculenta
Musa sapientum
Musa paradisiaca
Chrysobalanus icaco
Samanea saman
Mangifera indica
Bambusa arundinacea (many spp)
Polyscias guilfoylei
Carica papaya
Saccharum officinarum

Ipomoea fistulosa
Cocos nucifera
Terminalia catappa
Euphorbia truncata
Anthacanthus occidentalis
Hymenocallis (cultivated)
Antigonon
alldrandia
Zinnia elegans
Caesalpinia pulcherrima
Dolichos regia
Nerium indicum
Mirabilis jalapa
Ficus stipulosa
Rhoeo spathacea
Araucaria cunninghamii
Thunbergia grandiflora
Tectona grandis
Bougainvillea glabra (
Catharanthus roseus
Odontadenia grandiflora
Cordyline fruticosa
Caryota urens

Ixora williamsii - described ~~from~~ and illustrated from material sent from Trinidad by Bunzeglove to Sandwith Kew in 1961. Curtis Bot. Mag.

Ixora coccinea
Ixora chinensis

July 1 - air trip Trinidad Barbados, Antigua, Jamaica, Kingstown (Viscount, left side)

E. of Piarco a block of sugar cane, patches of pasture, but mostly secondary forest, with perhaps 10% pasture, a network of roads. This forest extends far to the south.

Curmuto Airport site largely open, grassy, but some scrub in bushy woods.

Slope of mountains up from Curmuto are shrubby wooded, no clearing & shifting agriculture at all.

No apparent dwarfing of forest on crests and summits. This forest would repay investigation.

N. E. coast is wooded to the beach. A very few clearings on one or two lower ridges and a village on one point - undoubtedly Matelot.

Tobago in distance and clouds at night

(to p. 63)

1962 Trinidad

July 10 - Mt. Harris Forest Reserve

4	21	Acnistus arborescens (L.) Schlecht. common in edge of forest	shrub; fruit yellow.
2	22	Tevillea cordifolia L. edge of forest	plant aromatic. vine; flowers dull yellow.
1	23	Pentaclethra macroloba (Willd.) Kty. common in second story of forest	tree 10 m. tall, filaments white.
3	24	Euphorbia glomeriflora common in bare soil beside road	plant, ascending; glands white.
2	25	Bidens pilosa Leucanthe Willd common on weedy roadside in forest.	rays white
2	26	Wedelia fruticosa Jacq. common in opening or hill in forest planting	scrambling extensive herb flowers yellow
4	27	Jonyalagenia	shrub 1-2 m tall, leaves with impress veins above; flowers white, fruit light blue.

July 10 - St. Augustine St. George Co.

4	28	Ixora casei Hance cultivated in garden	shrub 2 m. tall, flowers scarlet; fruit black when ripe. From same clonal type of Ixora williamsii Standley.

Barbados has low sea-cliffs and a rather wide fringing reef on the southeast coast, becoming low and fore s.w.ward, underneath there.

Plants seen -

Saccharum officinarum
Cocos nucifera
Delonix regia
Lantana sellowiana
Cordyline fruticosa
Buddleia (white, large-leaved than Asiatica)
Nephrolepis brevialis in forests
Acalypha wilkesiana
Catharanthus roseus
Petraea volubilis
Euphorbia pulcherrima
Philodendron (large sagittate leaf)
Clerodendron Egeria dense
Nerium oleander
Agave americana
Terminalia catappa
Pilea microphylla

Coral escarpments bounding terraces have a bit of natural woody vegetation. The sea cliffs have almost none except back of beaches.

Soil near airport black.

A little gallery scrub along bottom of ravine, their sides and in places a little adjacent bare grassy. Interior

scarps also grassy.

Soil in interim and toward west - mostly dark red to chocolate.

Dissected ground on west(?) side mostly cultivated in gardens, except where eroded down to rock. One patch of woods left here.

Land immediately around villages and dwellings in gardens, the remainder almost entirely in cane. Scattered trees. Some casuarinas obviously planted.

Marie-Galante - s.w. corner - secondary scrub and cultivation. N.w. corner front back of beach and a large grassy area behind that. Then mosaic of large patches of scrub and of cultivated patchwork.

Guadaloupe, s.w. peninsula, in distance to left. mostly cloudy. Fringing reef on east side of pen. Passed over east peninsula - small mosaic of cult. fields, patches, patches of scrub or woods, and grass.

City on west coast, airstrip behind it. Sugar plantation

on isthmus. Bay is only
appears to have a mostly
submerged barrier, with
reefs and numerous tiny
islets, extending northward
along coast of north peninsula
as a barrier reef with
only one inlet, deep lagoon
with some bare and one
or two cays in it.
North peninsula largely
grass (or cane) on lower east
slopes. Visibility poor.

Agtigua - west side
mountainous,
mostly thin scrub to grass,
denser woods in ravines.
Cultivation east of mountains,
some grass, patches of scrub
especially in ravines. Cane
on flat ground and gentler
slopes.

Plants -
Bactris
Pelonia
Leucaena leucocephala
Pilea microphylla
Azideracta indica
Hybiscus - roadsides
Phoenix canariensis
Chloris inflata
Rhoeo spathacea
Allamanda cathartica
Codiaeum variegatum
Cynodon dactylon
Vegetation in area of
airport has a slightly
xerophytic character, mostly
native thin scrub, some
cultivation.

Wide, mostly rather
reefy submerged reef
of southeast coast, form
a barrier reef off east
coast.

St. Kitts (shown 17) south
and
and north slopes cultivated
or in pasture - wooded only
in radiating ravines.
Low sea cliffs. Center
apparently wooded
but mostly in clouds

Two grassy islets, then
a corner of St. Thomas (woods)
and a small irregular
scrub-covered island. A rather
bare rock in distance to left.

Some small islands
in distance to left and
a very large one ahead,
probably Puerto Rico. Two
lagoons on east peninsula
past Cape San Juan. A belt

1962 Lesser Antilles - Puerto Rico.

Of forest ~~wood~~ coconut plantation
along coast to
west, sugar cane inland
on gentle slopes. A long
canal running inland.
More coconut plantation
with sand behind it
and then a large pond and
mangrove swamp with
much open water, coconuts
along beach and boats
on it.

Then a rather muddy
looking reef running
across a shallow bay to
San Juan. Better reef
just in front of east
part of city. Large
lagoon with mangrove
swamp between city and
airport.

San Juan

Mollaluca bracadendron
Asparagus sprengeri

Part way west on the
Puerto Rican coast is a large
area of typical Karst.
The hillocks are densely
wooded. Every square foot
of the flat ground between
them is cultivated or in grass.
Through this meanders

a broad flat stream
valley with an intermittent
stream meandering
through it.

The Karst forms a
definite broad belt
parallel with and
almost contiguous with
the base of the mountains.
The density varies
greatly in places
there is no flat ground.

There another stream
valley cuts across
it with a meandering
stream.

The soil of the flat
intervals is a brownish
red.

The karst becomes
more irregular westward,
but parts are dense in
part, large areas are
quite dense.

A fairly dense area
extends well west of
any central mountain
at all. South of it
is country with rather
low relief. Too cloudy to
see much of it. North of
the karst is a flat plain
completely planted to sugar
cane in pasture. This south of

This plain abruptly ends near the east tip of the island but a suggestion of the road goes almost to the tip

2nd stop

Somewhat west a small swampy, high, uncultivated island. Only sign of human activity a small low rectangle near western tip. Steeper slopes valley thinly vegetated.

Chrysalidocarpus lutescens
Plumeria obtusa
Casuarina obtusifolia
Olea europea
Pithecellobium dulce
Caesalpinia pulcherrima
Nerium oleander
Lonpea tomentosa
Malvaviscus
Hibiscus schizopetalus
Eugenia jambosa
Blighia sapida
Bambusa
Acalypha hispida
Piper aduncum
Hibiscus rosa-sinensis
Saccharum officinarum
Acalypha godseffiana
Allamanda cathartica
Ochroma pyramidale

July 12 - ~~Jamaica~~ Kingston
plants seen
Cassia javanica
C. fistula
Kalosix regia
Antigonon leptopus
Artocarpus altilis
Lagerstroemia indica
Mangifera indica
Cocos nucifera
Pritchardia pacifica
Ipomoea fistulosa
Alocasia macrorhiza
Plumbago auriculata
Graciadia officinalis
Calotropis procera
Tamarindus indicus
Petrea volubilis
Crossandra undulata
Leucaena purpurea
Ficus pumila
Clerodendrum speciosissimum
Holmskioldia sanguinea
Dieffenbachia (white spotted)
Euphorbia pulcherrima
Thevetia glauca
Cordia sebastena
Pithecellobium unguis-cati
Chrysophyllum cainito
Leucaena leucocephala
Tribulus cistoides
Petrea purpurea
Terminalia bottapa
Adenanthera pavonina

July 12 – trip to Cane River Falls

Long Mt. back of Kingston Harbor – covered by a closed somewhat thorny microphyllous scrub with scattered small trees. Coastal flat, also where not built up, covered by thorn scrub. Prosopis.

Hope River bed is a wide dry gravel wash.

Clark River, also, has a trickle of water.

Rhizophora swamps alternating with Prosopis scrub

Turned up R. canyon with steep limestone walls covered by microphyll scrub. Delonix abundant in bottom.

Cane River falls -
stream goes down
a limestone gorge to
waterfall. Below waterfall
is a more or less smooth
walled gorge - the bottom
of it has almost entirely
pioneer vegetation. Q
scrub on upper parts
of wall.
Trees, the same as
on lower walls.
Said to be 40' a year of
water in rainy season.
Catalpa longissima
Tecoma stans
Ficus sp.
Euphorbia bacteata (Bodgia)

Hills bet. Cane R. + Hope R.-
(Mt. Dallas)
scrub changes to semi
forest and forest upward
Jeffries hills grassy
(Kod 7 + begin 6/2-3
across upper Cane R. drainage
from n. slope Dallas Mt)
Rhoes established

700' -
750'

1962 Jamaica

July 12 - road to Cave River Falls, Newstead,

in subxerophytic scrub on steep limestone hillsides.

42629 Cordia collococca L.
2 occasional

3 30 Morinda royoc L.
occasional

2 31 Phyllanthus nutans Sw.
occasional

July 12 - Canyon below Cave River Falls in deep limestone gorge

2 32 Brexhavia diffusa L.?
occasional along path

1 33 Phyllanthus
occasional on bare rock ledge

1 34 Adiantum tenerum
common in crevices

3 35 (genus) Hapalidia conjugata (Sw.) Web.
common in crevices on cliffs on east side, not seen on west side.

1 36 Phyllanthus amarus Schum. Th.
occasional along trail

3 37 Spermacoce suffruticosa Jacq.
common in crevices and on talus

1 38 Euphorbia glomerifera (Millsp.)
common along trail

St. Andrew Parish

750-800'
150 m.

small tree; flowers dull green (flowering out of season)

slender shrub 2.5 m. tall; fruits greenish yellow.

shrub 1 m. tall; flowers reddish green.

100 m.

N. Portoricensis L.

stems decumbent, panicles ascending, leaves pale beneath;

erect shrub 0.7 m. tall flowers reddish.

small shrub; flowers orange-color.

plant spreading; flowers pinkish, closed in afternoon.

Wheeler

1962 Jamaica

42&39		Lycianthes [illegible] (L.)	small shrub, flowers clear yellow, almost completely regular.
2		rare in crevices	— erect
1	40	Cenchrus	
		rare along trail	
1	41	Spermacoce suffruticosa Jacq.	
		rare along trail	
1	42	Emilia sonchifolia (L.) DC.	flowers pale purple.
		occasional along trail	
2	43	Cuphea [illegible] Koehne	small shrub, flowers reddish.
		rare in rock crevices	
2	44	Pteris longifolia L.	
		occasional in rock crevices	

July 12 — Cane River Falls
on limestone cliffs and boulders

1	45	Rondeletia [illegible] Jacq.	shrub; flowers bulb — yellowish.
		occasional	
2	46	Cissus tripoliata C. microcarpa Vahl	vine, flowers red.
		common	
2	47	Heliotropium [illegible] (Torrey	sub-shrub, flowers white, minute.
		in crevices	
2	48	Muntingia calabura L.	small tree; flowers white.
		occasional	
3	49	Cissus sicyoides L.	vine, flowers yellow-green;
		common	
1	50	Cestrum diurnum L	shrub; fruit ripening.
		occasional	

1962 Jamaica

July 13 - trip from Kingston thru Castelton

North of divide - steep slopes, mostly on a purple conglomerate - non calcareous for the most part.

Very little natural vegetation - mostly a mosaic of small cult. patches thickets, coconut groves, bamboo clumps and thickets, house sites with breadfruit, bamboo etc. Thickly settled area, not shifting cultivation. Cecropia common.

grass fallow

Castelton Gardens - a very well-kept botanical garden with a good assortment of plant and numerous individuals of each. Many good palms.

St Mary Parish

Wag water R. - 4 acres across river and bluff of purple congl. & hypernium $2-3 ht. & Mt. David grass. (Dawn Pen)

Sugar cane in flat bottom of Wagwater R.

Grass fallow - Panicum maximum.

On lower slopes west of Port Maria coconuts are about the most prominent woody feature but the plantations are quite irregular - grassy slopes common also.

Point Galina

Rough limestone terrace water edge with no vascular plants - about 10-15 ft, pitted.

Then Rabdadenia, very depressed, then a few Plumeria, a few Cocoloba very depressed, then Tournefortia

Thrinax becomes abundant

At base of limestone cliffs well back of shore and perhaps 20' alt. striking, well preserved ripples, 5 mi. so of Port Maria.

Mouth of Dunns River, just west of Ochs Rios

Wooded sea cliff of limestone with flow of marl water cascading down over a

1962 Jamaica

— plants seen (cld. from p. 78)
Barringtonia asiatica
Glricidia sepium
Panicum maximum
Spathodea campanulata
Vetiveria
Thunbergia grandiflora
Acalypha wilkesiana
Pentas lanceolata
Lindapsus aureus
Caladium bicolor
Celosia argentea
Codiaeum variegatum
Alternanthera versicolor
Ficus pumila
Portulaca grandiflora
Jatropha podagrica
Russelia equisetiformis
Carica papaya
Coccoloba uvifera
Pithecellobium calycinum
Artocarpus heterophyllus
Argemone mexicana
Psidium guajava
Lippia nodiflora
Vernonia cinerea
Pandorea jasminoides
Cassia alata
Euphorbia tirucalli
Morinda citrifolia
Polyscias guilfoylei
Persea americana
Tabernaemontana divaricata
Ricinus communis

Pachirisonia aculeata
Jatropha multifida
Pedilanthus tithymaloides
Citrus aurantifolia
Citrus sinensis
Iranthemum pulchellum
Callisteplus chinensis
Ficus pumila
Tabernaemontana divaricata
Barleria prionitis
Haematoxylon
Coleus scutellaria
Clerodendrum ugandense
Salvia splendens
Mirabilis jalapa
Swietenia mahagoni
Annona muricata
Solanum lycopersicum
Pithecellobium calycinum
Albizia lebbek
Cleome spinosa
Chaetia tenuifolia
Lonchocarpus guineensis
Gerbera jamesonii
Moringa oleifera
Panicum maximum
Ficus carica
Thunbergia grandiflora
Boerhavia
Ricinus
Salvia coccinea
Pereskia (murex)

series of "sinter basins" deposiling travertine on trees, etc.
At base of cliff a number of interesting plants, e.g. Lobelia viridiflora, Aristolochia sp. etc.

Above Ocho Rios is Fern Gully, a winding limestone gorge, steep, densely wooded, with numerous ferns on the sides (75 sp. acc. Proctor).

Along coast near Ocho Rios is an open forest or savanna of Prosopis dioica. This is native and wild here, but the fruit is harvested for export.

Plateau above Fern Gully to the Moneague, old karst worth bauxite between hillocks.

Mt Diablo is a limestone massif with a karst-like topography. Densely wooded all over. Not too well known, botanically. A large sinkhole is used as a dump for waste (Fe$_2$O$_3$ + H$_2$O?). Large refining plant is on Mt Diablo (has bauxite concentrating plant. The plain itself is bauxite. Open woodly planted vegetation - breadfruit, coconut, Bligbia, Persea, etc.

Canyon of Rio Cobre - steep wooded limestone walls below Bog Walk. Very rainy scrubby forest.

Opens out after some miles on a plain mostly in sugar cane. Beyond the sugar is rather dry savanna with a little irrigated cane. Prosopis, Inga, etc.
Spanish Town.
Beyond, a patchy cult. plain - Ceiba, Prosopis, Mango & other trees scattered. Some sugar & bananas - more and more east toward Kingston.

1962 Jamaica

A magnificent open forest of Savanna with short grass. A great scattered Ceiba tree Savanna with low Prosopis, merging into Prosopis scrub.

July 13 - South west of Walkers, St. Ann's Parish

42451		Spermacoce suffruticosa Jacq. road embankment	500 m.	corollas pink

July 13 - Mouth of Dunn's River, South coast, St. Ann's Parish

1	52	Lobelia viridiflora L. sessilis base of limestone cliffs at S/L of beach.	1 m.	stem unbranched, 1 m. tall, leafy in top half; flowers light green.

July 13 - Galina Point, north of Port Maria

		~~South Coast~~	2 m.	St. Marys Parish
		on pitted limestone flat back of low ~~coastal~~	sea cliff	
3	53	Cassia occasional in open scrub	?	dwarf shrub; flowers yellow.
2	54	Croton occasional in open scrub		low shrub.
1	55	Cyperus ligularis L. occasional in open low scrub	c. planifolium L.C. Rich.	
3	56	Radicella very common in open dwarf scrub		dwarf shrub up to 0.5 m. tall flowers yellow.
3	57	Echites umbellata common in open scrub		vine, twining over bushes; flowers white

42658		Tournefortia graphaloides L.	rounded bush 1.5 m. tall.
1		local in scrub	
2	59	Morinda royoc L.	shrub; fruit green.
		common in scrub	
2	60	Spermacoce verticillata L.	shrub, 1 m. tall; flowers white.
		common in scrub	
1	61	Solanum racemosum Jacq.	suffrutescent; corolla purple.
		occasional in scrub	
1	62	Morinda royoc L.	dwarf scrub, procumbent.
		rare in exposed dwarf scrub in spray zone	
1	63	Ernodea ~~subsessilis~~ littoralis	dwarf shrub; sterile at this season.
		common in dwarf scrub in spray zone	
2	64	Croton	small shrub.
		occasional in scrub	
3	65	Strumpfia maritima Jacq.	dwarf shrub, flowers pinkish white, fruit white, fleshy.
		abundant in dwarf scrub in spray zone	
3	66	Citharexylum fruticosum L.	shrub 1.5 m. tall, spikes pendent, flowers white.
		occasional in scrub	
1	67	Suriana maritima L.	emergent shrub 1 m. tall; sterile
		occasional in dwarf scrub in spray zone	
3	68	Conocarpus erectus L.	shrub 0.7 m. tall.
		rare in ~~dwarf~~ scrub	
3	69	Erithalis fruticosa L.	dwarf shrub, 1-2 dm. tall; flowers white.
		common in dwarf scrub in spray zone	
3	70	Jacquinia keyensis Mez	shrub 3-4 dm. tall, flowers white.
		occasional in dwarf scrub in spray zone	
1	71	Wedelia trilobata (L.) Hitchc.	prostrate, flowers yellow.
		common on flats back of scrub zone	

42672 Pantheon lighthouse.
2 along path near buildings

July 13 – Between golden Valley and Nolan's Hill, Wagwater River, St. Andrew
1 73 Zornia
roadside bank in puple conglomerate rock area

July 14 – Eaton Hall, on Runaway Bay, North Coast, St. Ann's Parish
along coral strand
2 74 Canavalia rosea
common
2 75 Euphorbia
occasional in open sand and rock
74 Phaseolus lathyroides L.
rare, roadside
4 77 Cakile lanceolata (Willd.) O.E.
occasional at top of beach
4 78 Desmodium
common in sand flat
1 79 Euphorbia mesembrianthemifolia Jacq.
rare in sand flat
4 80 Spermacoce suffruticosa Jacq
common back from beach
1 81 Spilanthes
locally abundant
3 82 Caesalpinia bonduc (L.) Roxb.
in edge of thicket
1 83 Sesuvium portulacastrum
common in sand flat

flowers white

300 m.

Paris,

1 m.

vine, climbing in thicket; flowers rose pink

plant purple, prostrate

erect; flowers maroon.

plant much branched

fleshy; flowers white.

erect shrub 1 m tall

dwarf shrub.

plant spreading,

buds pinkish.

stems ascending; heads white.

scrambling vine, sterile;

collected to show compound stipules.

prostrate, very fleshy,

leaves not very glossy; flowers pink

Eaton Hall
is just
east of
Runaway
Bay

July 14 - Trip Kingston to ~~Sunday~~ Eaton Hall - same route as return yesterday from Dunn's River.

Reef in front of bay - a shelf out about 400 m. from shore at about 15 m. depth, with scattered ~~reefs~~ coral rock and a little acropora cervicornis - elsewhere of a very elongate, attenuate form, some sponges, etc, but not a ~~complete~~ closed formation. A deep channel cuts ~~near~~ this ledge. Back of this ~~and~~ platform is a depression ~~parallel~~ parallel to the reef front, which funnels down into the channel. The channel forms an outlet for the sediments ~~that~~ accumulated in the depression and on the reefs shoreward of it.

~~at 1:30~~
~~decided~~

Platform of pitted limestone at about 2½ ft above mean low tide line a good part of the shore. Collected a sample of the pitted surface just about at or somewhat below high tide level.

40

75
50
90-95
40

Eaton Hall is just east of Runaway Bay

July 14 – Trip Kingston to ~~Castalia~~ Eaton Hall – same route as return yesterday from Dunn's River.

Reef in front of bay – a shelf out about 400 m. from shore at about 15 m. depth, with scattered ~~coral~~ coral heads and a little acropora cervicornis – a very elongate, attenuate form, some sponges, etc, but not a well developed formation.

A deep channel cuts near the ledge. Back of this ledge, platform is a depression parallel to the reef front, which funnels down into the channel. The channel forms an outlet for the sediments accumulated in the depression and on the reefs shoreward of it.

Reef narrows where pass is located

'Platform of pitted limestone at about 1½ ft above mean low tide line a good part of the shore. Collected a sample of the pitted surface just about at or somewhat below high tide level.

Basins between 2 groins perpendicular to beach with reefs parallel to beach coming close enough to surface to prevent strong currents from scouring and removing plant fragments. Some areas thalassia and some bare ripple marked sand with a few balls and loose clumps of algae. Lowest part of basin collects thalassia fragments + algae to form a soup. In this are the most numerous algal balls. Wave action continuously rolls material in these basins back and forth.

Corallina subulata
Cladophora sp.
Digena sp.
Galaxaura sp.
Liagora sp.
Galaxaura marginata
Sargassum triquetrum (Gmel.) Grev.

Vegetation along shore is a mixture of herbaceous strand and low thickets, with coconut plantation back of it on the sand flat.

1962 Jamaica

4	84	Thalassia testudinarum König	forming sod in shallow water
3	85	Philoscenus vermicularis	common on sand
3	86	Borrichia arborescens (L.) DC.	local on limestone rocks
3	87	Colubrina asiatica (L.) Brongn.	local on limestone rocks
3	88	Halimeda gracilis Howe in T. Bg.	in deep water
1	89	Halimeda goreauii Taylor	in deep water
	90	Bryothamnion triquetrum (Gmel.) Howe	on reefs in shallow water
2	91	Padina sanctae-crucis Borg.	on reefs and flats in very shallow water
1	92	Turbinaria turbinata (L.) Kütz.	on rocks in very shallow water
		July 15 - ~~Hilltop~~ Pat Henderson -	Hill, above Green Bay, St. Catherine Parish
		in dense microphyllous scrub on bare limestone	100 m.
2	93	Capparis cynophallophora L.	fragrant shrub 1 m. tall, sterile
2	94	Guaiacum officinale L.	small tree 4 m. tall, fruit orange-yellow.
3	95	Cyostema caribaea (Jacq.) R. & S.	~~shrub~~ shrub 2.5 m. tall, almost leafless at this time
3	96	Bursera simplicifolia DC.	small tree 4 m. tall (others large), fruit green,
1	97	Rhacoma ~~crenata~~ occidentalis (L.) Krug & Urb.	shrub; ripe fruit red.

(to 11.102)

1 m.	sterile.
(L.) R.Br.	prostrate, sub-fleshy shrub up to 1 m. tall, grayish; heads yellow.
	twining tangled trichet 3 m. tall, leaves glossy; flowers yellow-green.

July 15 – Trip to Port Henderson area.

Flats n. of Port Henderson Hill – irregularly cane, more and more dry and saline as coast is approached. Batis, then

On hill itself the vegetation is relatively undisturbed – a spiny scrub on bare rock – Cassia sp. is perhaps most common shrub. Acacia, Capparis, Jatropha, Achatocarpus, Prosopis, Coccoloba uvifera (very prominent) Opuntia, Bonnetia, Tabebuia, Helicteres, Pancratium, Bursera (rare), Paullinia, Ophelonia, Diospyros, Tournefortia, Agonandra, Croton sp. Agave sp. Cereus, Brunfelsia, Cordia, Bernardia, Heliotropium, Metopium, Rhacoma, Leucaenopsis. Plants – low + bush (incl. bot. of scenic reef + Palisadoes)

Cathestecum brevifolium
Passiflora perfoliata

This is a predominantly area

1962 Jamaica
(ctd. from p. 99)

42698 Piscidia piscipula (L.) Sarg.
1 common

5 99 Sarcomphalis laurifolia (Sw.) Hook.
common

42700 Tabebuia pallida (Lindl.) Miers.
2 occasional

1 01 Bourreria calvtina (DC) Griseb.
occasional

1 02 Passiflora foetida L.
rare

1 03 Tournefortia hirsutissima (Spreng.) Griseb.
rare

4 04 Cissus trifoliata L.
common, climbing in arborescent Cereus

July 15 — Kingston

3 05 Bauhinia galpinii N.E.Br. ?
cultivated

July 16 — Gordon Town — Watling Park Road, grade above River Head, Rt. 400 m. St. Catherine Parish
roadside in scrub forest on steep limestone slope.

1 06 Anemia adiantifolia (L.) Sw.
common on

2 07 Selaria triticoides (L.) Sw.
common on

4 08 Guettarda scabra (L.) Vent.
occasional on

small tree, 4 m. tall.

small tree, 4 m. tall;
— flowers yellow green.

shrub 3 m. tall,
— fruit green.

shrub 2 m. tall,
flowers white;
(other seen, sterile, with
— leaves much larger)

vine climbing in
— bushes, flowers maroon.

shrub, fruit green.

climber; fruit green.

small tree, flowers salmon colored.

culms almost erect.

shrub 3 m. tall, buds white
corollas withered.

1962 Jamaica

July 16 - trip to Mason River savanna.

near Spanish Town - Prosopis scrub and scrub forest on small hills; scattered Prosopis, Samanea, etc. on flat land. Coconuts, mango, etc. along roads. Tribulus cistoides very abundant on roadsides.

Canyon below Bog Walk is densely wooded. Much breadfruit on floor of valley. Bamboo and Cecropia common on lower slopes, also some coconuts locally. Less disturbed forest in upper slopes and cliffs of limestone.

Bauxite plant near Carpenters concentrates alumina from terra rossa that is accumulated in depressions in karst.

Worthy Park Valley is a large flat covered by sugar plantation surrounded by high karst. Drained by a river that goes underground through the mountains to River Head then joins R. Cobre.

Hills bet. Lluidas Vale and Crofts Hill - limestone hills partly cleared - rich flora in thickets on steep places.

Mason River savanna a rolling flat surrounded by hills of limestone on north and beds a river on other side.

A closed mixture of many species of sedges, grasses, several ferns, Centella etc. herbaceous in places, in other places shrubby, the shrubs mostly Melastomacea In some areas scattered Cyrilla, Clethra, Cordia jamaicensis Eugenia, Arcoloba, etc.

Low areas are boggy with hummocks of Blechnum with deep channels between them. Sphagnum in channels. Blechnum is dominant top apparently underlain by a clay pan.

(Grade above River Head on W.P. Water Rd)

about (Roadcut from Hill W of Worthy Park looking across Worthy Park V.)

Some cultivation — taro, maize, etc.
Pigs, goats, donkeys are grazing around.
Mr. Atkinson, owner, is interested in having the area preserved.

July 14 — Hills between Eluidas Vale and Croft Hill Clarendon ~~St. Catherine~~ Parish in thicket on steep limestone slope.

42709		Lantana camara L. roadside	shrub 1 m. tall; flowers orange, fruits turning blue.
3			shrub 1 m. tall.
7	10	Portlandia grandiflora L. on cliff	—
3	11	Croton longifolius Lam.	— slender shrub 4 m. tall. twines; ♂ corollas deep maroon purple, firm glossy.
3	12	? Ipomoea hispallida Hook. climbing in trees	
1	13	? Gyrocarpus ellipsis Sw.	small tree,
2	14	Byrsonima coriacea (Sw.) DC.	— flowers bright yellow
3	15	(Malad.) Tetrazygia pallens occasional	small tree; petals — white stamens yellow.
1	16	Salvia, petiolata L. occasional	aromatic subfrutescent: flowers blue.

1700' 5 20 —

1962 Jamaica

4	2719	Lasiacis sorghoidea (L.) Hitchc.		
		rare		
3	20	Bouteloua barbata (Lam.) Gleason		
		common on roadside		
2	21	Setaria setosa (Sw.) Beauv.		
		common on roadside		
1	22	Cheilanthes microphylla Sw.		
		rare at base of cliff above road		
4	23	Cordia jamaicensis I. M. Johnst.		shrub; flowers white.
		occasional		
2	24	Psychotria deens? Gleason		shrub; flowers white.
		rare		
1	25	Stachytarpheta jamaicensis (L.) Vahl		flowers medium purple, not very pale.
		occasional in roadside		
8	26	Eugenia sp. nov. aff. acutisepala Proctor		small tree; flowers inconspicuous, white. (being described in work by Proctor)
		occasional		

July 16 - ~~Hardwar Gut~~

1	27	Pilocarpus pulchra Griseb.		shrub.
		occasional		

July 16 - Kellits, Clarendon Parish 600 m.

1	28	Senecio discolor (Sw.) DC.		shrub; flowers dried.
		roadside thicket		

July 16 - Mason River savanna 2300' 700 m.
west of Kellits, Clarendon Parish
on rolling open ground

6	29	Ipomoea nil (L.) Roth		
		climbing on small shrubs		
		in savanna		
2	30	Panicum polycaulon Nash		prostrate, forming mat.
		common in moist savanna		

(42720) Spermacoce suffruticosa Jacq.
spreading plant; flowers purplish

1962 Jamaica

4	2	31	Panicum Acuminatum Sw. occasional in moist savanna
3		32	Coccocypselum Repandum Nutt. common in moist savanna
1		33	Cuphea parsonsia (L.) R. Br. rare in savanna
1		34	Sauvagesia Erecta L. common in moist savanna
1		35	Agalinis albida (Nutt.) Pennell occasional in moist savanna
—		36	(melast.) Acisanthera quadrata Juss. ex Pers. common in moist savanna
1		37	Paspalum notatum Flügge occasional in moist savanna
1		38	Scleria Ryncospora nervosa (Mich.) Ell. occasional in moist savanna
2		39	Scleria hirtella Sw. common in moist savanna
1		40	Scleria ciliata Michx. var. elliottii (Chapm.) Fern. in moist savanna
2		41	Utricularia pusilla common on open mud.
2		42	Scleria pterota Presl common in well drained savanna
3		43	Cyrilla racemiflora L. occasional in well drained savanna
3		44	Cyrilla " xam.
2		45	Centella repanda (Pers.) Fern. abundant generally in savanna and scrub
1		46	Spermacoce Brevicaulis Rubiaceae (Lam.) Spreng. common in well drained savanna

procumbent & ascending

prostrate; flowers purple.

flowers pink

flowers white.

flower whitish

flower rose pink.

depressed.

erect; flowers yellow.

erect

shrub 2½' in. tall, flowers white, young fruit greenish.

same, but young fruit reddish.

leaves erect.

fruiting stems erect.

flowers pinkish white.

4	2747	Desmodium barbatum (L.) Benth. rare in well drained savanna	flowers purple.
1	48	Polygala paniculata L. rare in well drained savanna	roots have wintergreen odor when crushed; flowers purplish.
2	49	Panicum parvifolium Lam.? common in well drained savanna.	
3	50	Fimbristylis complanata (Retz.) Link common in well-drained savanna	culms solitary, erect.
2	51	Hypoxis decumbens L. common in shady spot	bulbs bulbs deeply buried; flowers yellow.
3	52	Eleocharis geniculata (L.) R. & S. locally abundant in well drained savanna.	
3	93	(grass) Panicum stenodes Griseb. abundant locally in savanna	
1	54	(sedge?) Rhynchospora elegans A. Gray common in savanna	culms sharply trigonous.
4	55	Eleocharis mutata (L.) R. & S. ~~in bog~~ local in open water in bog	
2	56	Fuirena umbellata Rottb. local in ~~bog~~ open water in bog	
3	57	Osmunda cinnamomea L. local in hummocks in bog	strictly erect, sterile at this season.
2	58	Panicum hians Ell. local in bog	
2	59	(melast) Rhexia aquatica (Aubl.) Macbr. common in bog	flowers white.
3	60	Mayaca fluviatilis Aubl. common in open spots in bog	flowers white.
1	61	Burmannia alata Sw. rare in edge of bog	flowers pink.
1	62	Xyris jupicai L. C. Rich. occasional in edges of bog	flowers yellow

42763 Eleocharis retroflexa (Poir.) Urb.
1 common in mud at edge of bog

x 64 Panicum parvifolium Lam.
on and between hummocks in bog.

4 65 Andropogon bicornis L.
common locally in savanna

2 66 Tournefortia hirsutissima L.
rare in stream thicket

1 67 Rhynchospora polyphylla
common in ditch

3 68 Rhynchospora robusta (Kunth)
common in shrub savanna
in wet spots

x 69 Rhynchospora polyphylla Vahl
common in shrub savanna

1 70 Blechnum serrulatum L. C. Rich.
abundant generally,
dominant in bogs.

x 71 Eleocharis elegans (H.B.K.) R.&S.
local in muddy place

1 72 Equisetum giganteum L
local in low thicket & scrub

1 73 Panicum glutinosum Sw.
rare in scrub

1 74 Emilia javanica (Burm.f.) Rob.
occasional in dry disturbed
savanna.

1 75 Buxus bahamensis (Sw.) Sprang.
rare in scrub

3 74 Cordia jamaicensis (Jacq.) Urban
rare in well drained savanna

3 77 Lycianthes asperta (Sendtn.) Bitter
rare in well drained savanna

erect, ± 2 m tall.
shrub; flowers white.

~~Population frontiers H to K~~ (Lucea)

Black ...?

Panicum parvifolium Lam.

= P. ... Jamaica Jacq.

shrub ± m. tall.

shrub (m. tall,
flowers yellow

1962 Jamaica

42778 Sphagnum
1 in deep channels between hummocks in shrub swamp.

4 79 Lindsaya
common in shrub swamp

2 80 Melochia villosa (Mill.) F. & R.
local in small knoll in savanna.

flowers purple.

2 81 Lantana
occasional in well drained savanna.

shrub 1.5 m. tall

4 82 Eugenia
local in savanna and scrub.

shrub 1.5 m. tall; fruit immature.

3 83 Clethra
rare in savanna

shrub 2 m. tall; flowers white

July 16 - Mason River, Northwest of Kellits, St. Ann's Parish on wooded limestone hilltop

with f. Portoricensis

3 84 Phyllanthus
3 85 Croton

4230' 700 m.

shrub 2 m tall. flowers red

shrub 3 m. tall. spikes pendent, flowers white.

1962 - Jamaica - Pedro Key

July 18 - Northeast Cay

Plants noted
Lesuvium portulacastrum
Tournefortia argentea
Cyperus ligularis
Fuirena maritima
Portulaca oleracea
~~Eg~~ Paspalum distichum

The key has a beach ridge around sides and a shallow depression in central portion. The has some salt water and is mostly covered by Lesuvium. The extends up almost to the top of the inner slope

Set a graduated stake, with marks at inch intervals in a small pool near north end of depression.

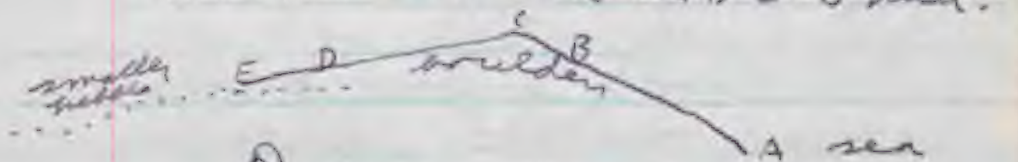
Level on July 18	12 noon	6"
	5 p.m.	5½"
	7 p.m.	5"
19	9:30 a.m.	7½"
	1:45 p.m.	7"
	7:07 p.m.	6½"
	10.01 p.m.	6½"
20	7:15 a.m.	8"
	5:30 p.m.	6½"
21	7:30 a.m.	7"

Birds

Large flock of frigate birds, ± 65
~~Gulls~~ Terns, many scattered.
Noddies, several seen
2 laughing gulls
6 Royal terns
Bridled terns mainly resting, flying up and coming to rest again.

Boulder ridge on northeast side of canals up to 1 m. or more in greatest length (largest noted 64 x 34 x 20") mostly apparently single colonies. Sand in interstices in lower layers.

Littorina sp. scattered on these boulders to the inner edge of the layer of large boulders. Most abundant in B-C-D zone.



Depression with water said to have resulted from phosphate excavation. Cyanophyceae abundant in water forming a coating on bottom which is loosening, rising to top.

Frigate birds arrived about 10:30 a.m. soaring mostly just to windward of island. Numbers increased, then fell off till at about 6:15 p.m. there were only 18 left.

4 left at 6:30 rest at 7

Sooty terns rested on rocks, bushes, etc. facing into wind, mostly on windward side of island especially on boulder ridge. When approached they seemed a bit reluctant to leave.

Royal terns congregated on a beach rock point at south end of islet. With them were two laughing gulls which soon left. The terns stayed sitting for a time.

Rocks on beach ridges are notably darkened (by algae?). Portulaca seedlings growing in pits in rocks.

Scaevium generally very green and healthy, but in places where it is growing at about the water table but the leaves dead, stems still green.

The beach ridge on the west side (northern part of it) is broad and of sand. On the south part of east side a boulder ridge has been covered by sand.

Great slabs of beachrock have been thrown up onto & over the top of the beach ridge in the southeast shore.

In about the middle of the west side is a stretch of boulder ridge.

At night land crabs are quite numerous, but not very large. Seem to be more abundant back of the beach. Scarcely any seen on beach proper, and none going down to the water. Both land and hermit crabs seem a bit more numerous toward the south, especially hermit crabs. Only one ghost crab seen, at south point.

Portulaca has 20-30 stamens 7-10 mm. across.

July 19 - N E Cay.
4 noddies near s. end.
2 sandwich terns
(light back, large beakbill)
on s. point.
1 frigate bird at 8:30
4 at 10:30 25 at 11:00
increased rapidly after that.
to well over 100.

hand samples.
1 south point windward
2 " " leeward
very close together (2 m).
3 150 paces n. on east shore
intertidal below a
small gravel beach
4 same, storm beach
above small gravel
beach. (also incl.
Tournefortia fruits
from nearby plant).
5 from about 100 paces
farther north, north
of last hurricane -
sand from back of
crest of boulder ridge.
6 - n westside, 150 paces
from point, intertidal
7 same, well above
h. t.
8 150 paces farther
north, ~~reef~~ just
below extreme
wash.
9 from top of intertidal beach
opposite tent.

South extension of
s. point has been removed
by storm, leaving beach
rock ridge

1. inner series of beach rock forms sharp crests. This is strongly fluted & channelled on inner side, rather irregularly, but sharply. Mostly strongly undercut and edge is toothed. So waves break over it the current is very strong downward, much less water goes back. Channels are covered by algal film.
2. An irregular eroded snag of higher beach rock from which a sample was collected for surface examination. Arrow indicates upper surface. Cover was certainly protected from much erosion.
3. Cobble from accumulation in pot hole for surface examination

Bottles, jars, etc.

1. insects, spiders, etc. collected in tent and immediate vicinity - tent pitched on tesuvium mat on sand. N.E Cay

2 Bottom layer from sweeping tuniara
Top layer from sweeping tesuvium
N.E. Cay

3. Land shell from surface of ground at south tip of N. E. Cay.

4 Hermit crabs from w. side of N.E. Cay - on land!
Land crabs from w. side NE. Cay on land.
Ghost crabs from south point of N.E. Cay on beach. above high tide level - only seen here.
Littorina - from top of boulder ridge on east side of Cay.

5 Insects from Tournefortia

6 Insects etc. found on beach (Halobates) and in low cliff in boulder ridge back of beach rock on w. side of south point.

7. Insects from root crowns of Cyperus ~~stapfianus~~ back of beach ridge at south point.
(Carp black beetle running on ground.)

8 Insects from Tournefortia gnaphalodes. Southwest Cay

9 Crabs, etc. from Middle Cay.

10 Insects, etc. from under rocks in occasionally flooded depression with Cyperus ~~stapfianus~~ Middle Cay.

11 lizard from under stones as in 10. Middle Cay

12 grasshoppers from Tournefortia scrub on sand flat, middle Cay

13 Spiders, etc. from Tournefortia, Southwest Cay

14 N.E. Cay, under ~~rocks~~ stones in low wet ~~tesuvium~~

13 lizard. NE Cay

Two large swallows very dark blue, almost black on back, light tan beneath, tail dark but lightly banded, forked. They were skimming the low tension and ponds. (Burke said he saw a number of them last evening, Cave swallows?

Clumps of cypenus near south point all or practically all have ants in the root crowns - some of them at least 2 species, a yellow one and a black smaller one which varies greatly in size. Both run rapidly when aroused and the black one bites vigorously and painfully. A few other insects also found in their root crowns - a beetle or two, Collembola, etc. Vial #7. Small cricket not caught.

Along the west shore of south point perhaps 50 yards north, or more is a low cliff cut in a beach ridge of small boulders, many sea fans, etc. In this, in the

interstices, is a fairly diverse fauna - 2 spp. of Lepismids, 1 of Machilis, 1 or 2 beetles, spiders, a pseudoscorpion (not caught). (There in vial #6)

The open water areas in the central depressions are lined with a friable mud - greenish and with considerable organic matter (algal?) in the upper inch and a half, turning to gray, strong fetid odor, at least faintly H2S. For one or two inches, then changing gradually to brownish and becoming pale downward, also becoming more sandy. (sample 6) 1 sample is a mixture from upper 5 inches.

The areas of terrarium tend to be rocky

The central parts of the islet, especially in the south part, have many irregular heaps of stone. Perhaps remains from phosphate mining - waste material!

Practically no insects attracted to a strong coleman lamp.

Line leveled with bucket from post with stake to high tide mark on beach. A-W.

0	—	5' 9"
19	-	+ 11"
21	-	+ 84"
14	-	+ 27"
17	-	+ 11"
7	-	— 28"
7	-	— 41"

July 20 - Southwest Cay
Longitudinal depression almost the length of the cay surrounded by slopes covered by luxuriant tournefortia mat
Piles of rock scattered generally.
Sand dune on northwest corner.

Tournefortia on beach ridge around north half - scattered plants of it around the south half.

Cyperus scattered irregularly, especially in central part of ~~the~~ shallow beach ridges and slope.
Paspalum scattered, also, and toward central depression forms sizeable clumps in which noddies nest

A bare mound of sand on w side has many crab holes, a few tiny tufts of Paspalum

Birds

more boulders when on bay shore up to 3-4 d in inches, 1-2 on beach.

List of animals collected on Pedro Cays

by F. R. Fosberg, July 1962

1. Insects, spiders, etc., collected on North East Cay around camp site, on Sesuvium mat on well drained ground, some attracted to lights or to food. The area is a wide sand ridge on the leeward side. July 18-24 '62.

2. The insects in the layer above the cotton obtained by sweeping Sesuvium. Those on the bottom collected by sweeping Suriana maritima (mostly not in flower). North East Cay, July 18 '62.

3. Land shell found on surface of the ground under Suriana maritima scrub on flat ground inland from beach near south tip of island. July 18 '62.

4. Large jar, North East Cay: Land crabs from broad sand ridge on west side, burrowing. Ghost crabs from top of beach above high tide level, near south tip of islet, only seen here. Littorina, common on high boulder ridge, up to 10-12 feet, clinging to boulders--apparently most abundant on highest part of ridge. Hermit crabs from back of beach on south half of west side of cay.

5. Insects obtained by beating Tournefortia gnaphalodes, south end of North East Cay. July 19, 1962.

6. Insects, spiders, etc., found in interstices of low cliff in boulder ridge just above high tide level on west side of south end of North East Cay, July 19, 1962.
   Also Halobates and Lygia from beach on east side of south end of cay.

7. Insects, etc. from root crowns of Cyperus ligularis, back of beach ridge north of south point of North East Cay, in rocky ground. Each clump had ants, usually both black and yellow (the black beetle was running on the ground). July 19, 1962.

8. Insects ~~xxxspiders~~ from Tournefortia gnaphalodes on ~~Southwest~~ North East Cay, July ~~19~~ 20 '62.

9. Crabs, hermit crabs, lizards and grasshoppers from southeast side of Middle Cay, July 21, 1962. All were under stones in low spot except grasshoppers which were in Tournefortia scrub on beach on west side.

10. Insects, spiders, etc. from under rocks in occasionally flooded depressions with a sparse stand of Cyperus ligularis, dark gray soil. On southeast side of Middle Cay, July 21, 1962.

11. Lizard from under stones, southeast side of Middle Cay, July 21, 1962.

12. Grasshoppers from Tournefortia scrub (same as # 9).

13. Spiders and insects from Tournefortia gnaphalodes, Southwest Cay, July 20 '62.

14. Insects, spiders, millipeds, earthworms, etc., from under low heap of stones and conchs in low wet saline area, in Sesuvium portulacastrum vegetation, near middle of North East Cay, July 22, 1962.

15. Lizard from Sesuvium portulacastrum on low sand ridge, North East Cay, July 22, 1962.

After these have been examined, please retain any that are of special interest for the Institute of Jamaica museums and forward the rest to

F. R. Fosberg
Pacific Vegetation Project
% National Research Council, Washington 25, D.C., U.S.A.

I would very much appreciate names for any or all of these, associated with the lot numbers.

July 20 - Southwest Cay
Longitudinal depression almost the length of the cay surrounded by slope covered by luxuriant teseurium mat
Piles of rock scattered generally.
Sand bike on northwest corner.

Tournefortia on beach ridge ~~on~~ around north half - scattered plants of it around the south half.

Cyperus scattered irregularly, especially in central part of ~~the~~ both beach ridges and slope
Paspalum scattered, also, and toward central depression forms sizeable clumps in which noddies nest

A bare mound of sand on w side has many crab holes, a few tiny tufts of Paspalum

Birds
Multitudes of sooty terns with eggs, not very few.
large flocks of frigate bird soaring on windward side.
Crowded colony of nests.
brown boobies
hundreds nesting on flat ground on east and south parts of cay.
noddies.
nests with eggs, small accumulations of teseurium and shells in clumps of Paspalum
laughing gull
many flying around protesting with noddies when nests of noddie are disturbed

both royals and smaller ones
royal terns? very pale above, black head ring, beaks - but smaller than sooty tern - sitting in flocks around the ponds.
common tern (Sterna hirundo)
handwich terns - with royals ~~and~~ and cootie.
Noddy nests all seem to be made of teseurium more bulky when in bushes up to 3-4 d inches, 1-2 cm thick.

plants for bird: 6+ sp.

Clump of cordia on
w. side about 5 m. across
only a stump left of central
tree, peripheral ones
badly wind-beaten.
Several other clumps
scattered to north
end.

Sample of sand from
under nodding nest
in Tournefortia mat
on inner slope.

Many nodding nests
in Tournefortia bushes.
A few on ground. All made
of Heliotropium.
Tournefortia has been
cropped away to some
extent (photo)

photos Three views across heads
one Heliotropium in north
end

photos several of sand hole
and seedling Tournefortia,
and of broad belt of
Tournefortia scrub on
sand flat, at northeast
corner. Island is from 1 to 1.5
m. high, closed to almost as

photos panoramic series south
from inner edge of scrub
near north end showing
sooty terns, belts of
vegetation, & pond.

Locally much Portulaca
on sandy places on east
beach ridge which is a
mixture of sand and
cobbles. Also on a
consolidated phosphate
platform just inland
from beach ridge perhaps
2 m. above pond level
(photos) (samples)
Perhaps half an acre -
multitude of sooty terns
a few sanderlings tern.
A few of the sooties have
eggs.

Colony of 30-40 frigate
bird nests with almost
grown young - bluish
white heads, can fly a
little. Nests are mounds
of guano supported by
broken Tournefortia branches,
but definitely on ground
Colony perhaps 15 x 30 m.
in Tournefortia on windward
side. (photos)

Wide Portulaca belt
on e. side with many

brown boobies nesting on ground. nests of Portulaca with seasinella, Lasiasum (photos), 1 or 2 eggs, these greenish white, scarcely spotted. Many birds. All except one seen in adult plumage.

A few Suriana clumps scattered on this flat. (photos). Some mats of Lesuvium mixed with Portulaca, etc. Paspalum.

Patches of phosphate platform common here, somewhat south of area from coconut trees.

See. large circular patches of Lesuvium many in area Portulaca on both loose sand and on consolidated or semi consolidated phosphatic conglomerate.

Around south end a very high very steep boulder ridge, possibly partly or wholly artificial.

Found Messerschmidia on outer slope. (photos)

On s.w. corner a small pond enclosed by cobble ridge. small a [illegible] inside ridge. Dead Tournefortia + some ~~[illegible]~~ seedlings + Lesuvium

on bar (photo)

Just north of this on inner edge of the beach ridge, a hollow overhanging phosphate platform (sample) (photo)

Boobies seen nesting in all plants except Heliotropium, also on ground and in mass of sea fan, etc. Always at least some semblance of a nest, but when on ground very little. Almost always some shells.

Principal vegetation type are Lesuvium mat, Tournefortia scrub, and Portulaca flats. Ponds in depressions contain blue green algae.

Paspalum in scattered on beach ridges and inner slopes, also Cyperus, but more local. One coconut tree on a mound of sand.

Photos 1 to 4 finished here, 1-5 started and mostly used here (finished on N.E. leg, from Star Island) [illegible] some in S.W. finishing N.E.

July 19 - North East Cay
on flat calcareous soil

42786 Cakile lanceolata
a few seedlings only. back of beach on west side

87 Sesuvium portulacastrum
abundant. covering most of the islet

88 Cyperus planifolium L. C Rich.
~~hepaticus~~ L.
locally abundant on sandy & gravelly beach ridges

89 Paspalum distichum L.
common on leeward beach ridge of sand

90 Portulaca ~~Kentrophyllum~~ L. Sessile L.
common on sandy places

91 Tournefortia graphaloides
common on beach ridges

92 Suriana maritima L.
locally abundant on beach ridges

leaves fleshy, flowers white

prostrate, forming dense mat, leaves fleshy, subglossy, stems somewhat reddish, flowers rose-purple.

Caespitose, forming discrete clumps. culms erect; leaves glaucous.

depressed plants all seen sterile.

prostrate, fleshy, flowers yellow 8-10 mm. across, stamens 20-30. rounded gray bush. flowers white, fragrant. bush to 1.5 m. tall flowers bright yellow.

July 20 Southwest Cay
on flat calcareous ~~mostly~~ phosphatic soil.

93 Suriana maritima L.
a few scattered clumps

shrub 1.5 m. tall; flowers bright yellow.

94 Heliotropium curassavicum L
one plant on flat ground inland from east side.

glaucous, fleshy, flowers white.

1962 Jamaica – Pedro Cay

42795 Tournefortia gnaphalodes L.
2 abundant on sandy beach ridges, less so on rocky ones

5 96 Cordia sebastena L.
: a few clumps on
.. north west beach ridge

2 97 Cyperus ~~ligularis~~ L.
scattered locally on inner slopes and tops of sand ridges

2 98 Paspalum distichum L.
scattered generally on island but not abundant

2 99 Heliotropium curassavicum
on ledges of phosphatic conglomerate on south end of islet

42800 Sesuvium portulacastrum L.
3 abundant on inner slopes above ponds and locally on flats

3 01 Portulaca oleracea L.
abundant on flat sandy areas

July 21 – Middle Cay
on flat calcareous, probably phosphatic soil.

2 02 Cyperus ligularis L.
two stands locally

continued p. 141

low rounded bushes 1 m. tall, gray.

shrubs 1–2 m. tall, flowers scarlet. (said to have been introduced)
– erect clumps; leaves glaucous.

spreading when young, forming erect clumps when older, all seen sterile.

prostrate, fleshy, forming extensive mats, stems reddish green, leaves sub-glossy, flowers rose-pink.
– prostrate, fleshy.

erect clumps; leaves glaucous.

1962 Jamaica - Rodes Cay

samples (ctd.) from p. 139

10 - mud from bottom of small pool in central depression of N.E. Cay (see p. 127)

11 - sand (phosphatic?) from under nodule nest in detritus mat on inner slope of S.W. Cay.

12 similar sand from 0.5 m. away from nest. under detritus.

13 Phosphatic conglomerate from n.e. side of S.W. Cay from edge of ledge.

14 similar sample from S.W. corner of S.W. Cay.

~~Jamaica - North East Cay~~

(to p. 145)

July 21 - Northeast Cay
several sandwich and
royal terns resting on
south point.
several swallows flying
over lesuerum.

Along east coast beachrock
is continuous and
comes up to the edge of the
boulder beach and extends
under it. There are a scatter-
ing of fairly large boulders
generally lying on the
beachrock surface
and generally a belt
a meter or so in width
that is shaded white,
almost free of the algae
that cover it farther
out probably from the
rolling back and forth
of the boulders when the
waves are rough. This
area is generally fairly
smooth. In some places are
conspicuous joint cracks,
with V-shaped grooves
grooves ⊥ to strike ~~and~~
more or less developed

Boulder ridge has
very large corals and
coral fragments. But
most seem to be single
colonies or pieces of single
colonies, rather than of
consolidated detritus or
of reef frame.
(photos 62-4 begin
62-6 begin
first 12: ⅔ of boulder
ridge, boulders, stream
zone with faint graving
and a mass of consolidated
detritus with Littorina
Southward along west
are a number of large blocks
of consolidated detritus (photo)
lying at the bottom of
the boulder beach.
Lesuerum seedlings in
sandy pockets on top of the

Seedlings of Tournefortia,
Portulaca, fairly common
mostly on sand, but
some Portulaca also
on rubble.

Ctd. from p. 113
10:30 am 6 3/4"
12:30 pm 6 1/2
7:10 am 6"

July 12 10:30 am 7"

Well log
0-20" pale dry sand some shells & pebbles (sample 15)
20-53 moist pale sand similar to above perhaps more rich sample 16
53-63" gravel, with much terrapin concretions becoming looser sample 17 and with large interstices downward.
63-72" gravel with little sand.
72" water (at 3 p.m.)
72-76+ gravel under water
water sample 18 (2 bottles)

(over ctd. from p. 146)

July 27 – Middle Cay
great flat area with
only a small depression
near northeast corner.
Sesuvium around
depression, or slopes
down to it. Another
patch of sesuvium
half way to other end.
Patch of cyperus between
most of islet covered
by a pure, open to close
stand of Portulaca.
Periphery with Tournefortia
except a small stretch on
southeast.
Several dozen blue
faced boobies here
on ground a few brown
boobies, also
some Portulaca in the
Tournefortia scrub which
is rather open. On recently
deposited beach to west
around w end. are
numerous Tournefortia
seedlings (photos).
(photos across island)
No beach ridge on s and
w sides. Cobble ridge,
not very high, on east.
Here is a red flat with
lines of beachrock out
some upends and extending

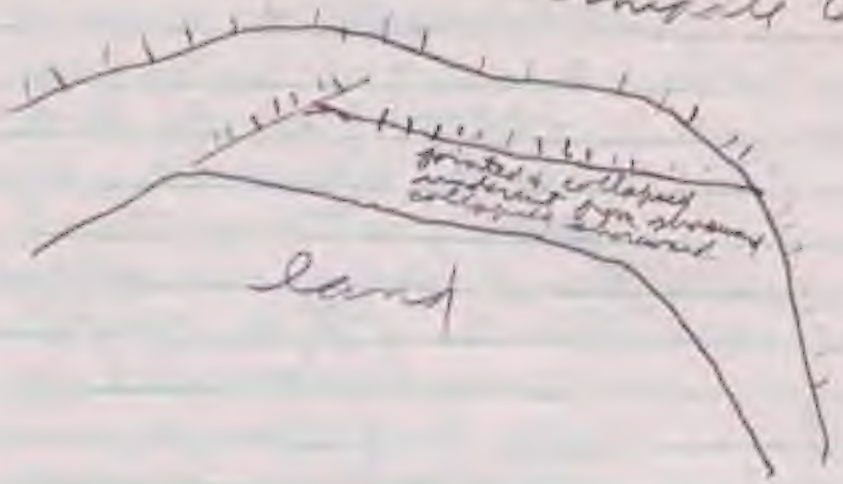
1 noddy (eggs)
1 Laughing gull (eggs)
a number of sooty terns
(one downy chick) (one egg)
south beyond point
suggesting that here
the islet is eroding away
on the other side it is
being added to.

The cobble ridge has
a cliffed seaward edge
and has some sand
in it about 4 dm. below
crest. The whole ridge
is not 1 m above h.t.

Inland from beach
ridge a depression
with brown soil and
cyperus. Many crabs,
hermit crabs, a lizard
etc. This area is flooded
occasionally.
Patches of cyperus
occasional between
sesuvium and beach ridge.

Blue faced booby
feeding a fully grown
fully feathered motle
dark gray-brown young.
Many

beach rock on northern margin of



— det. from 138

42803 Sesuvium portulacastrum L.
2 pure stands in low spots.

2 04 Portulaca oleracea L.
dominant, pure stands over large areas where boobies nest.

2 05 Suriana maritima L.
very local in Tournefortia

2 06 Tournefortia gnaphalodes L.
forming low scrub around periphery.

July 22 — Northeast Cay

2 07 Blue green algae
gelatinous layer on bottom of highly saline pool

The largest part of the Cay is covered by Portulaca flat — a flat of sand about 2 ft. very slightly higher than the belt of Tournefortia along the shore. The sand, though white on top, is yellow-brown below (Stamps 19). Blue faced boobies nest here in great numbers. In mid-afternoon there were a couple of dozen, by 5 pm. there were hundreds. Portulaca mats 2-4 dm. across are now almost touching to almost their diameter apart, are prostrate, forming mats, fleshy, leaves sub-glossy; flowers now purple.

shrub 1 m. tall

study

July 22 - Marly bottom of extremely saline ponds in depression

Profile
- felatinous layer
- hard crust
- sample 20
- specimen no. 42807

- soft somewhat friable layer with much burrows
- dark gray brown
- a brown a mottled, even blackish,
- strong H_2S odor
- 2 - 5 cm.

below this a stiff clay-like marl, beginning paler and more granular downward, a few shell and coral fragments, very easily broken by fingers at about 8-10" numerous coral, algal, and shell fragments embedded in the marl (sample 22)

A core taken with a can is sample 21
Water sample from pond 23.

Crust suggests consolidation under these conditions.

small shower at about 10:15. At the first few drops the land crabs came out of their burrows in swarms and crawled about in the depression, apparently taking drops of water from the leaves and putting them in their mouths. They stayed out as long as any water remained on the leaves. A few hermit crabs also were seen with the land crabs.

Turned over stones in low tide on wet marl in depression flat half way to south end from ext. Several big cockroaches. Black ants living with them. The small white isopod-like millipeds with brush tail (these move rather rapidly and jump), a small gray isopod, a fly (?), an earthworm, and a land (not coll.) crab.

July 23 – Kingston to Green Hills, up Hope River Valley

Slope up from Kingston has open vegetation varying on one hand to savanna, on the other to closed thicket & forest esp. in ravines. The more open areas are on slopes and ridges. Panicum maximum is dominant in the grass layer.

Montane sclerophyll from about 1900' to 4-5100'. Lower part largely dominated by Acacia villosa. Strong andean affinity. Baccharis, Satureja Verbesina (Chaenocephalus) etc. Where undisturbed forms a dense closed scrub, but here much burned and opened.

Above ± 100' Melinis and Tithonia abundantly naturalized. Gleichenia locat. Erigeron karwinskyanum common, naturalized.

Higher up Cecropia, Chusq

Centaurea cineraria
Anthemis tinctorium ?
Cynara scolymus
Cirsium lanceolatum
Rumex obtusifolius

Widespread species:
Erigeron karwinskyanum
Eugenia jambosa
Catalpa longifolia
Cinchona
Lonicera japonica
Cytisus scoparius
Hydrangea
Tibouchina semidecandra
Hedychium coronarium
H. " flavum
Tropaeolum majus
Prunus persica
Impatiens sultana
Cuphea platycentra
Asparagus plumosus
Drymaria cordata
Tritoma uvaria
Selaginella krausiana
Adiantum raddianum Presl (Cumeata)
Verbena bonariensis
a. cuneatum L. f. not Fost. =
a. radddianum Pres, Tent. Pte. 158, 1836
Pelargonium zonale ad off.
Dahlia variabilis
Coleus scutellarioides
Plantago major
Tripolium vulgare
Youngia japonica
Gnaphalium purpureum
Thelypteris torresiana
Buddleia japonica
Datura "arbores"
Salvia splendens
Acanthus ebracteatus

above Newcastle to
divide is excellent
undisturbed montane
sclerophyll.
At divide much reforesta-
tion with various ferns and
podocarps, etc.
Hardwar gap
On north slope - rather
undisturbed montane
rain forest - mostly
on steep slopes. Trees
5-8 m. tall, one tree layer.
A dense but indistinct
shrub layer. Epiphytes
abundant, incl. orchids,
bromels, ferns, mosses,
hepatics. Tree ferns
common, also Chusqueas,
but not abundant enough
to form tangles.
(photo - Kodak 62-7 begin.)
Gleichenia common
Trees taller in ravine
Podocarpus
Dendropanax
Many gravia vines
common, some arbor-
Phyllocladus sp. 2

Rawson
Pt
Rosehill
and
Caledonia
Peak

Nephalium
a brown irregular tubes
1-1.5 dm. across, with
numerous branches
which are deflexed
and have erect clavate
crimson inflorescences
both staminate and
pistillate, mostly
pistillate, covered
by large fleshy scale-
like caducous bracts;
seeds exserted from
the fruiting masses,
have a white fleshy
caruncle; and carried
off by ants, which
eat the caruncle and
leave the seed. A
large colony of ants
lives in the mass
of plants. The whole
mass is 3-4 dm. across.
(photos)
Photo of Rose Hill -
practically untouched
montane rain forest,
from S.E. slope
Caledonia Peak. T
(Portland Pos.)

July 23 - Green Hills, east of Hardwar Gap on moist road cut in montane rain forest — 3750' (1140 m)

4-2808 Coccocypselum herbaceum Rudd. — prostrate, branches ascending, flowers purple.
under low shrubs

2 09 Phyllanthus Euxanthus Urb.
common on talus

2 10 Elecharis elongata (HBK) Boeck
in seepy place — culms terete, shorter ones erect, longer pendent

1 11 Youngia japonica (L.) DC. — japonica (L.) Baill.
common

1 12 Spermacoce — flowers white, hairy within.
common

1 13 Lycopodium cernuum L.
occasional

1 14 Gramnitis serrulata (Sw.) Sw.
common locally

1 15 Dyckia Dyckia platyphylla (Andr.) Baker
local — creeping downwards on vertical banks.

same - roadside — 3750' (1140 m)

1 16 Juncus bufonius L.

same - in garden — 3750' (1140 m)

1 17 Ipomoea ~~fatuoides~~ confusa (L.) Roem. & Schult. — twiners, flowers white, turning yellow, very fragrant.
subspontaneous

1 18 Cardamine hirsuta L. — flowers white.
spontaneous

July 23 along Newcastle Road below Irishtown, St. Andrew Parish — 2400' (730 m)

2 19 Polypodium plumula Humb. & Bonpl. ex Willd. — epiphytic on tree in montane subtropical forest

1962 Jamaica

July 24 – 7 rad up Mt Horeb from Hardwar Gap

Ridge with scrub forest, gnarled and mossy 4-8 m. tall Podocarpus, Helycosmum, Cyrilla, Melastomaceae, etc., very irregular. Disc irregular shrub layer, tangled with Gleicheniaceae.

Many Vriesea tanks, many ferns, a few Cyathea Hebraeum and other mosses on ground. Selaginella abundant

SCIEN
THE INSTITI
KINGSTO

Miss M. - H. Sachet
Pacific Vegetation Project
c/o National Research Council
2101 Constitution Ave., N.W.
Washington 25, D.C.
U.S.A.

Dear Marie-Hélène,

PLANTS OF TRINIDAD
Caroni Co.

Cyperus articulatus

Locality Caroni Swamp

Occurrence Locally abundant in open marshes along old canal in Rhizophora swamp

Date July 5, 1962 Alt. 0 m

Coll. F. R. Fosberg No. 42549

Remarks Erect, several stems from base

ACCS

ATION

159

SCIENCE MISSION
THE INSTITUTE OF JAMAICA
KINGSTON, JAMAICA

Miss M. - H. Sachet
Pacific Vegetation Project
c/o National Research Council
2101 Constitution Ave., N.W.
Washington 25, D.C.
U.S.A.

Dear Marie-Hélène,

PLANTS OF TRINIDAD
St. Andrew Co.

Utricularia

Locality Aripo Savanna

Occurrence Common in dense grass in open wet grassland on gray silt soil

Date July 8, 1962 Alt. 35 m

Coll. F. R. Fosberg No. 42608

Remarks Flowers white with yellow median mark on palate

158 1962 Jamaica

July 24 – 7 mi. ESE Mt Horeb from Yardsmouth

Ridge with some forest, granular soil
Terminalia, Pterocarpus, Hedyosmum, Cyrilla, Melicoccus, etc., very rocky in places. Dense irregular shrub layer. Tangled vines. Pleistocene?
Many Vriesea terrestris, many grass, a few Cyatheas

1962 Jamaica

July 24 – 7 rad up Mt Horeb from Hardwar Gap

Ridge with scrub forest, gnarled and mossy 4-8 m. tall Podocarpus, Hedyosmum, Cyrilla, Melastomaceae, etc., very inaccessible. Disc irregular, shrubby, tangled with gleicheniaceae.

Many Vriesea tanks, many bees, a few Cyathea ... other ferns. Undet

SCIENCE MUSEUM
THE INSTITUTE OF JAMAICA
KINGSTON, JAMAICA, W.I.

20 May 1963

Miss M. - H. Sachet
Pacific Vegetation Project
c/o National Research Council
2101 Constitution Ave., N.W.
Washington 25, D.C.
U.S.A.

Dear Marie-Hélène,

AD

nces

IATION

SCIENCE MUSEUM
THE INSTITUTE OF JAMAICA
KINGSTON, JAMAICA, W.I.

20 May 1963

Miss M. - H. Sachet
Pacific Vegetation Project
c/o National Research Council
2101 Constitution Ave., N.W.
Washington 25, D.C.
U.S.A.

Dear Marie-Hélène,

Thanks for your recent letter. The Jamaican plants are now being sent; the delay was due to my slowness in completing the identifications, which in turn was caused by too many other things to do! The list of name is enclosed; I have indicated a few of which we would appreciate having duplicates. In one case (#42779) I have actually withheld a specimen needed for study, so for this perhaps you could just send a label.

Generally speaking, these plants were not dried as well as they should have been, and in some cases the leaves are detached. This would not ordinarily have happened, but at the time I was too occupied to supervise the drying as I should have, considering that the two boys were new to the work. They failed to realize that 40-watt bulbs did not provide enough heat, and I didn't find out they were not using the right (75-watt) bulbs until most of your material was already dried.

One thing that kept me very busy last fall was our acquisition of 36 new steel herbarium cases, thanks to a Rockefeller grant. This meant reorganizing the entire collection. The old wooden cases are still in good use for storage of unmounted material, duplicates, and supplies. A large additional room has been made available for this purpose, and for the first time we are really adequately housed, with plenty of space for expansion. The next major objective is air-conditioning! This is badly needed.

We have mounted and accessioned more than 4,000 sheets since you were here. One of the interesting collections that came in was a set of Bro. Alain's Puerto Rican plants.

I'm sorry not to have acknowledged receipt of the elephant books. They were very slow in coming, but in due course the boys got them and were delighted.

So far my summer plans are uncertain, but I may possibly come up to Washington and New York in August or September. I hope you will be around if I do. Please give my regards to Ray.

Sincerely yours,

Dick

George R. Proctor
Botanist.

GRP/zl
Encl.

* = duplicate requested.

JAMAICAN PLANTS COLLECTED BY F. R. FOSBERG

July, 1962

Det. by G. R. Proctor

42629. Cordia collococca L.
30. Morinda roioc L.
31. Phyllanthus nutans Sw.
32. Boerhaavia erecta L.
33. Phyllanthus latifolius Sw.
34. Adiantum melanoleucum Willd.
35. Heppiella corymbosa (Sw.)Urb.
36. Phyllanthus amarus Schum. & Thonn.
37. Borreria laevis (Lam.)Griseb.
38. Euphorbia hypericifolia L.
39. Lisianthus cordifolius (L.)Griseb.
42640. Anthephora hermaphrodita (L.)Ktze.
41. Borreria laevis (Lam.)Griseb.
42. Emilia
43. Cuphea ciliata (Sw.)Koehne
44. Pteris longifolia L.
45. Rondeletia trifolia Jacq.
46. Cissus microcarpa Vahl
47. Heliotropium angiospermum Murray
48. Muntingia calabura L.
49. Cissus sicyoides L.
42650. Cestrum
51. Borreria laevis (Lam.)Griseb.
52. Lobelia viridis McVaugh
53. Cassia clarensis (Brit.)Howard ? *
54. Croton discolor Willd.
55. Cyperus planifolius L.C.Rich.
56. Rachicallis americana (Jacq.)Ktze.
57. Echites umbellata Jacq.
58. Mallotonia gnaphalodes (L.)Brit.
59. Morinda roioc L.
42660. Borreria verticillata (L.)G.F.W.Meyer
61. Solanum racemosum Jacq.
62. Morinda roioc L.
63. Ernodea littoralis Sw.
64. Croton discolor Willd.
65. Strumpfia maritima Jacq.
66. Citharexylum fruticosum L.
67. Suriana maritima L.
68. Conocarpus erecta L.
69. Erithalis fruticosa L.
42670. Jaquinia keyensis Mez
71. Wedelia trilobata (L.)Hitchc.
72. Parthenium hysterophorus L.
73. Lourea vespertilionis (L.f.)Desv.
74. Canavalia maritima (Aubl.)Thou.
75. Euphorbia blodgettii Engelm. ex Hitchc.
76. Phaseolus lathyrioides L.
77. Cakile lanceolata (Willd.)O.E.Sch.
78. Desmodium tortuosum (Sw.)DC.
79. Euphorbia buxifolia Lam.
42680. Borreria laevis (Lam.)Griseb.
81. Spilanthes urens Jacq.
82. Caesalpinia
83. Sesuvium portulacastrum L.
84. Thalassia testudinum Konig
85. Philoxerus vermicularis (L.)R.Br.
86. Borrichia arborescens (L.)DC.
87. Colubrina asiatica (L.)Brongn.
88. Halimeda gracilis Harvey ex J.Ag.
89. Halimeda goreauii Taylor
90. Bryothamnion triquetrum (Gmel.)Howe
91. Padina sanctae-crucis Børg.
92. Turbinaria turbinata (L.)Ktze.

(Nos. 88-92 det. L. Green)

42693. Gymnanthes elliptica Sw.
94. Guaiacum officinale L.
95. Exostema caribaeum (Jacq.)R. & S.
96. Bursera simplicifolia DC.
97. Rhacoma crossopetalum L.
98. Piscidia piscipula (L.)Sarg.
99. Sarcomphalus laurinus Griseb.
42700. Tabebuia riparia (Raf.)Sandw.
01. Bourreria
02. Passiflora perfoliata L.
03. Torrubia discolor (Spreng.)Brit.
04. Cissus trifoliata L.
05. Bauhinia galpinii N.E.Br. ?
06. Anemia adiantifolia (L.)Sw.
07. Scleria lithosperma (L.)Sw.
08. Guettarda argentea Lam.
09. Lantana camara L.
42710. Portlandia grandiflora L.
11. Croton corylifolius Lam.
12. Ipomoea horsfalliae Hook.
13. Gymnanthes elliptica Sw.
14. Byrsonima coriacea (Sw.)DC.
15. Tetrazygia pallens (Spreng.)Cogn.
16. (not found)
17. (not found)
18. Salvia serotina L.
19. Lasiacis divaricata (L.)Hitchc.
42720. Borreria laevis (Lam.)Griseb.
21. Scleria lithosperma (L.)Sw.
22. Cheilanthes microphylla Sw.
23. Cordia jamaicensis I.M.Johnst.
24. Psychotria aff. dura Griseb.
25. Stachytarpheta jamaicensis (L.)Vahl
26. Eugenia sp. nov.
27. Palicourea
28. Senecio discolor (Sw.)DC.
29. Ipomoea rubella House
42730. Panicum
31. Panicum aciculare Desv.
32. Coccocypselum herbaceum Aubl.
33. Cuphea parsonsia (L.)R.Br.
34. Sauvagesia brownei Planch.
(= S. erecta L. ?)
35. Gerardia albida (Brit. & Penn.)
36. Acisanthera quadrata Juss. ex Poir.
37. Paspalum
38. Rhynchospora rariflora (Michx.)Ell.
(No Jamaican specimen in IJ !)
39. Scleria hirtella Sw.
42740. Scleria ciliata Michx.,
var. elliottii (Chapm.)Fern.
41. Rhynchospora cyperoides (Sw.)Mart.
R. microcephala (Brit.)Brit.
R. fascicularis (Michx.)Vahl
42. Scleria pterota Presl
43. Cyrilla racemiflora L.
44. " " "
45. Centella erecta (L.f.)Fern.
46. Borreria laevis (Lam.)Griseb.
47. Desmodium barbatum (L.)Benth.
48. Polygala paniculata L.
49. Panicum parvifolium Lam. ?

42750. Fimbristylis complanata (Retz.)Link
51. Hypoxis decumbens L.
52. Scleria georgiana Core
53. Panicum stenodes Griseb.
54. Rhynchospora oligantha A.Gray var. breviseta Gale
55. Eleocharis mitata (L.)R. & S.
56. Fuirena umbellata Rottb.
57. Osmunda cinnamomea L.
58. Panicum zizanioides H.B.K.
59. Nepsera aquatica (Aubl.)Naud.
42760. Mayaca fluviatilis Aubl.
61. Buchnera elongata Sw.
62. Xyris jupicai L.C.Rich.
63. Eleocharis retroflexa (Poir.)Urb.
64. Panicum parvifolium Lam.
65. Andropogon bicornis L.
66. Tournefortia hirsutissima L.
67. Paspalum fimbriatum H.B.K.
68. Rhynchospora robusta (Kunth)Boeck.? (immature)
69. Rhynchospora polyphylla Vahl *
42770. Blechnum indicum Burm. (B. serrulatum L.C.Rich.)
71. Eleocharis elegans (H.B.K.)R. & S.
72. Equisetum giganteum L.
73. Panicum maximum Jacq.
74. Emilia javanica (Burm.f.)C.B.Rob.
75. Buxus laevigata (Sw.)Spreng.
76. Cordia jamaicensis I.M.Johnst.
77. Lisianthus exsertus Sw.
78. Sphagnum
79. Lindsaea portoricensis Desv. (* - specimen withheld - please send label)
42780. Melochia villosa (Mill.)F. & R.
81. Casearia arborea (L.C.Rich.)Urb.
82. Eugenia wilsonella F. & R., vel aff.
83. Clethra occidentalis (L.)Steud.
84. Phyllanthus arbuscula (Sw.)Gmel.
85. Croton laurinus Sw.
86-92 (not found)
93. Suriana maritima L.
94. Heliotropium curassavicum L.
95. Mallotonia gnaphalodes (L.)Brit.
96. Cordia sebestena L.
97. Cyperus planifolius L.C.Rich. *
98. Paspalum vaginatum Sw.
99. Heliotropium curassavicum L.
42800. Sesuvium portulacastrum L.
01. Portulaca oleracea L.
02. Cyperus planifolius L.C.Rich. *
03. Sesuvium portulacastrum L.
04. Portulaca oleracea L.
05. Suriana maritima L.
06. Mallotonia gnaphalodes (L.)Brit.
07. (?)
08. Coccocypselum herbaceum Aubl.
09. Phyllanthus tenellus Roxb.
42810. Eleocharis elegans (H.B.K.)R. & S.
11. Crepis japonica (L.)Benth.
12. Borreria laevis (Lam.)Griseb.
13. Lycopodium reflexum Lam.
14. Grammitis serrulata (Sw.)Sw.
15. Dichaea pendula (Aubl.)Cogn.
16. Juncus bufolius L.
17. Lonicera confusa DC.
18. Cardamine hirsuta L.
19. Polypodium plumula auctt., non H.B.W.

42820. Pilea grandifolia (L.)Blume
21. Cobaea scandens Cav.
22. Pilea weddellii F. & R.
23. Nephrolepis pectinata (Willd.)Schott
24. Calceolaria chelidonioides H.B.K.
25. Galinsoga ciliata (Raf.)Blake
26. Cyperus (Kyllinga) tenuifolius (Steud.)Dandy
27. Calceolaria (sp. indet. - please send name if possible !)
28. Oxalis corniculata L.
29. Besleria lutea L.
42830. Isachne arundinacea (Sw.)Griseb.
31. Cionosicys pomiformis (Macf.)Griseb.
32. Selaginella denudata (Willd.)Spr.
33. Hymenophyllum lanatum Fée
34. Hymenophyllum polyanthos (Sw.)Sw.
35. Panicum glutinosum Sw.
36. Elaphoglossum latifolium (Sw.)J.Sm.
37. Palicourea alpina (Sw.)DC.
38. (not found)
39. (not found)
42840. Coccocypselum pseudotontanea Griseb.
41. Psychotria corymbosa Sw.
42. Grammitis graminea (Sw.)Ching
43. Hymenophyllum polyanthos (Sw.)Sw.
44. Thelypteris deltoidea (Sw.)Proctor
45. Asplenium alatum H. & B. ex Willd.
46. Ctenitis villosa (L.)Copel.
47. (not found)
48. Peperomia swartziana Miq.
49. Piper fadyenii C.DC.
42850. Polypodium repens Aubl.
51. Peperomia alata Ruiz & Pavon
52. Polytaenium lineatum (Sw.)J.Sm.
53. Uncinia hamata (Sw.)Urb.
54. Grammitis cultrata (Willd.)Proctor
55. Trichomanes crispum L.
56. Danaea jamaicensis Underw.
57. (lichen)
58. Urera elata (Sw.)Griseb.
59. Trichomanes scandens L.
42860. Trichomanes rigidum Sw.
61. Peltapteris peltata (Sw.)Morton
62. Grammitis asplenifolia (L.)Proctor
63. Lobelia assurgens L.
64. Rhynchospora polyphylla Vahl (sens. lat.)
65. Ilex macfadyenii (Walp.)Rehder
66. Podocarpus urbanii Pilger
67. Dendrophthora opuntioides (L.)F.& R.
68. Schradera involucrata (Sw.)K.Schum.
69. Haenianthus incrassatus (Sw.)Griseb.
42870. Clusia havetioides (Griseb.)Pl.& Tr.
71. Eugenia biflora (L.)DC., juvenile
72. Eupatorium critoniforme Urb.
73. Hedyosmum arborescens Sw.
74. Relbunium (Galium) hypocarpium (L.)Hemsl.
75. Fragaria vesca L.
76. Juncus platyphyllus (Wieg.)Fern.
77. Ageratum houstonianum Miller
78. Nephrolepis exaltata (L.)Schott
79. Urechites lutea (L.)Brit.

42880. Piper discolor Sw.
81. Cheilanthes microphylla Sw.
82. Polypodium plumula auctt., non H.B.W.
83. (fungus on dead insect)
84. Adiantum fragile Sw.
85. Guazuma ulmifolia Lam.
86. Digitaria sanguinalis (L.)Scop.
87. Bunchosia media (Ait.)DC.
88. Borreria laevis (Lam.)Griseb.
89. Pilea microphylla (L.)Liebm.
42890. Scleria lithosperma (L.)Sw.
91. Polypodium heterophyllum L.
92. Lasiacis divaricata (L.)Hitchc.
93. Rauvolfia nitida Jacq.
94. Tillandsia setacea Sw.
95. Chiococca alba (L.)Hitchc.
96. Polypodium latum (Moore)Sodiro
97. Portlandia grandiflora L.
98. Piper discolor Sw.
99. Ocotea robertsonae Proctor (ined.) *
42900. Psychotria nervosa Sw.
01. Guettarda argentea Lam.,
var. glabrata Urb.
02. Borreria laevis (Lam.)Griseb.
03. (not found)
04. Drymaria cordata (L.)Willd. ex R. & S.
05. Euphorbia hirta L.
06. Tragia volubilis L.
07. Forsteronia floribunda (Sw.)A.DC.
08. {Pilea grandifolia (L.)Blume
{Polypodium "pectinatum" X "plumula"
09. (not found)
42910. Gyrotaenia spicata (Wedd.)Wedd.
11. {Cheilanthes notholaenoides (Desv.)Max.
{Cordia bullata (L.)R. & S.
12. Polypodium piloselloides L.
13. Pilea crassifolia (Willd.)Blume
14. Anthurium scandens (Aubl.)Engl.
15. Borreria laevis (Lam.)Griseb.
16. Asparagus plumosus Baker
17. Cynoglossum amabile Stapf & Drum.
18. Anemia adiantifolia (L.)Sw.
19. Thelypteris reptans (J.F.Gmel.)Morton
42920. Gesneria acaulis Sw.
21. Thelypteris serra (Sw.)R.St.J.
22. Rondeletia cymulosa Proctor (ined.)
23. Rondeletia sylvestris S.Moore
24. Rondeletia cymulosa X sylvestris ? ined.
25. Hippobroma longiflora (L.)G.Don
26. Polystichum echinatum (J.F.Gmel.)C.Chr.
27. Phyllanthus arbuscula (Sw.)Gmel.
28. Acrosynanthus jamaicensis Howard & Proctor
29. " " " "
42930. Eugenia axillaris (Sw.)Willd.
31. Alvaradoa jamaicensis Benth.
32. Portlandia coccinea Sw.
33. Psychotria asiatica L.
34. Eugenia monticola (Sw.)DC.
35. Erithalis harrisii Urb.
36. Rhytidophyllum tomentosum (L.)Mart.
37. Pilea sp. nov.
38. Tectaria heracleifolia (Willd.)Underw.
39. Cheilanthes notholaenoides (Desv.)Max.,
intergrade toward C. microphylla Sw.

42940. Asplenium erosum L.
41. (?) lilacinum
42. Adiantum cristatum L.
43. " " "
44. Polypodium angustifolium Sw.
45. Guettarda argentea Lam. *
46. Portlandia coccinea Sw.
47. Lonchocarpus
48. Coccoloba krugii Lindau
49. Solanum (Lycianthes) stellatum Jacq.
42950. Pavonia scabra (Vogel)Stehle & Quent.
51. Chiococca parvifolia Wullschl.
52. Eugenia sp. nov. ? (would like to borrow this) *
53. Asplenium jamaicense Jenm.
54. Polystichum harrisii Maxon
55. Ayenia laevigata Sw.
56. Acidoton urens Sw.
57. Selaginella hispida (Willd.)A.Br.
58. Mandevilla torosa (Jacq.)Woodson
59. Eugenia clarendonensis Urb.
42960. Tournefortia maculata Jacq.
61. (Myrtaceae - gen. & sp. indet.)
62. Lagetta lintearia Lam.
63. Neea nigricans (Sw.)F. & R.
64. Daphnopsis occidentalis (Sw.)Kr. & Urb.
65. Nephrolepis exaltata (L.)Schott
66. Piper arboreum Aubl., sens. lat.
(P. verrucosum Sw. ?)
67. (not found)
68. Mimosa bimucronata (DC.)Ktze.
69. Stachytarpheta jamaicensis (L.)Vahl
42970. Digitaria horizontalis Willd.
71. Stachytarpheta mutabilis (Jacq.)Vahl
72. Emilia javanica (Burm.f.)C.B.Rob.

1962 Jamaica

MAP OF

TRINIDAD

With Roads showing Distances
Telephone Pay Stations
Gas Stations
etc

TRINIDAD AUTOMOBILE ASSOCIATION
94 FREDERICK STREET
PORT-OF-SPAIN
TRINIDAD
B.W.I.
TELEPHONE 34445

1962 Jamaica

January – 7 – 1 sd mt
= 9ab

SHELL

YOU CAN BE SURE OF SHELL.

Gorgan collected Halophila
Baillonis to a depth of
240 ft on ~~coral~~ ~~bottom~~
on both coasts of Jamaica
in water slopes.

1962 Jamaica

July 24 – 7 rail up Mt Horeb from Hardware Gap

Ridge with scrub forest, gnarled and mossy 4-8 m. tall Podocarpus, Hedyosmum, Cyrilla, Melastomaceae, etc., very irregular. Dense irregular shrub layer, tangled with Gleicheniaceae.
Many Vriesea tanks, many ferns, a few Cyathea fibrosum and other mosses on ground. Selaginella abundant.

Gorean collected Halophila baillonis to a depth of 240 ft on ~~coral~~ ~~bottom~~, on both coasts of Jamaica on outer slopes.

1962 Jamaica

July 24 - Between Green Hill and Hardwar Gap, along road. in montane rain forest

42820 Pilea (no. sp. - mostly Proctor)
= P. grandifolia (L.) Bl.

1 21 Cobaea scandens Cav.

1 22 Pilea weddelli F & R.
on steep road cut

2 23 Nephrolepis pectinata (Willd.)
on steep road cut

2 24 Calceolaria deltidontata Hook.
on wet roadside

1 25 Galinsoga parviflora
common on roadside

1 26 Cyperus brevifolius
occasional on roadside

1 27 Calceolaria pinnata L.
rare on wet roadside

1 28 Oxalis corniculata L.
common on roadside

July 24 - raving on north side of Hardwar Gap, Portland Parish in montane rain forest

2 29 Besleria lutea L.
common

1 30 Isachne [illegible] Griseb.
occasional

1 31 Lycopodium phlegmaria (1964 f.)
rare on

3500-4000'
Portland Parish

unbranched succulent herb 1 m. tall; leaves strongly bullate, purple beneath.

extensive vine, climbing over bushes; flowers purple.

stems fleshy, red; leaf veins strongly impressed above.

nodes enlarged; corolla light yellow rays white.

6. alata (R. & P.) Blume
head green

6. (Polyblepharis) laciniata (Sw.) Benth.
erect; corolla pale yellow.

shrub 1.5 m. tall, calyx pale orange; corolla white, fruit deep orange.

stem elongate, sprawling, herbaceous vine, flowers white.

4	2832	Selaginella denudata (Link) Spr.	procumbent, plane parallel to ground surface.
3		abundant on banks along trail	
+	33	Hymenophyllum polyanthos epiphytic on tree trunk	
3	34	Hymenophyllum lanatum, epiphytic on tree trunk	
+	35	Hymenophyllum abruptum Pook. epiphytic on tree trunk	missing
1	36	Hex (sub-sect. Ivacta) peduncularis Loes. rare	small tree 4 m. tall, steris.
1	37	Panicum glutinosum Sw. rare	culms scrambling, spikelets glutinous.
1	38	Elaphoglossum latifolium (Sw.) T. Moore epiphytic on tree trunks	
3	39	Paliconrea alpina (Sw.) DC. occasional	small tree 5 m. tall; thyrse orange red, buds yellow, corollas whitish.
4	40	Coccocypselum pseudotontaneum occasional on bank above trail	prostrate; flowers white, fruit blue.
2	41	Psychotria (a Paliconrea) occasional	shrub, thyrses purple, corollas whitish.
1	42	Grammitis (Sw.) Desv. rare, epiphytic on tree trunks	
1	43	Hymenophyllum polyanthos common, epiphytic on tree trunks	fronds curved downward
3	44	Thelypteris dentata (Sw.) Proctor occasional on bank above trail	

July 24 - Ravine between Rose Hill and Caledonia Peak in montane rain forest

3	45	Asplenium alatum H. & B. ex Willd. local	north of Hardware Gap. Portland Parish 4600'

1962 Jamaica

4	46	Cteniti[illegible] (L.) Copel. occasional
3	47	Scyphularia occasional, not parasitic.
3	48	Peperomia epiphytic on tree trunk
7	49	Piper occasional
1	50	Polypodium occasional, epiphytic on tree trunk
1	51	Peperomia epiphytic on tree trunk
3	52	[illegible] epiphytic on tree trunk
1	53	Uncinia hamata (Sw.) Urb. common on bank along trail

July 24 - ~~southeast~~ slopes of Caledonia ~~Road~~ Peak, N of Hardware Gap. Portland Parish in montane rain forest

1	54	Grammitis mollis (S.) epiphytic on tree trunks
1	55	Trichomanes terrestrial, on bank along trail
1	56	Danaea terrestrial, locally abundant
1	57	Parmelia epiphytic on tree trunk
3	58	Urera occasional
4	59	Trichomanes scandens L. epiphytic on tree trunk
1	60	Trichomanes terrestrial

frond very large, stipe hollow. (copy lines 1-22 on p. 155)

forming loose mat, leaves subfleshy, shrub 3 m. tall; spikes erect.

leaves rather thin.

slender small tree or shrub 4 m. tall, stems and leaves stinging somewhat.

42861 Peltaptaris peltata (Sw.) Moore
1 rare, epiphytic on fallen tree trunk

4 42 Grammitis asplenifolia (L.) Proctor
common, epiphytic on tree trunks

July 24 - Trail up Mt. Hesla from Handsworth Gap, St. Andrew Par. 4000-4500'
in low granular montane rain forest on ridge

1 63 Lobelia assurgens L.
rare in open spot

erect, unbranched herb 1 m. tall, stems and main leaf veins purple; corolla dull dark purple

2 64 Rhynchospora
common

stems weak, ascending - at least distally, slender tree 5 m. tall, leaves larger on leading

3 65 Ilex
rare

shoots; fruit black.

4 66 Podocarpus
common

small tree, bushy in appearance, 8 m. tall.

3 67 Dendropthora obtuntioides (L.) Tiegh. & Lond.
occasional, parasitic on Cyrilla

joints somewhat distinctly flattened; fruit red.

3 68 Schradera exotica (Jacq.) Standley
occasional, epiphytic in trees

shrub, somewhat vine-like, fruit immature, disks strongly rugose

3 69 Psicotria Psychotria corymbosa Sw.
occasional

shrub; thyrses purple; corollas whitish.

3 69a Hoffmannia
occasional or rare

tree 8 m. tall, corollas white, mostly fallen.

70 Clusia
occasional

small tree.

1 71 Eugenia bicolor var.
rare

shrub 1.5 m tall; sterile.

1 72 Eupatorium
rare

shrub 3 m. tall.

1962 Jamaica

4/2 3	73	Hedyosmum very common	aromatic shrub 3 m. tall, ripe fruit translucent white.
		~~Galium hypocarpium~~	
		July 24 - Hardwar Gap St. Andrews Par.	1300 m 3950'
4	74	Galium hypocarpium occasional on road cuts	tangled vine; flowers pale green; fruits orange, fleshy.
2	75	Fragaria common on roadside banks	flowers white; fruit red, achenes in shallow pits.
3	76	Juncus tenuis Willd. common on ~~roo~~ grassy road cut	small tufts
2	77	Ageratum houstonianum common on road side.	aromatic; flowers mauve.
		July 25 - Maggoty, on Black River, St Elizabeth Par. on steep hill of rough limestone	150 m
3	78	Nephrolepis common on road cut	fronds erect.
2	79	Echites common in secondary scrub	tangled vine; flowers bright yellow.
4	80	Piper in open secondary scrub	shrub 1.5 m. tall; berries white.
1	81	Cheilanthes in rock crevices in opening	
3	82	Polypodium common in shade	NW fronds arcuate
1	83	(fungus) on old fern rachis	

1962 Jamaica

July 27 - train trip from Kingston to Maggoty

10:40 Just out of Kingston - open scrub forest of Prosopis for a short way, then a village with house-gardens - trees landscape. Then green pasture with scattered bamanas. Then along harbor saline flats, locally marshy on seaward side of tracks, on other side partly village but pasture. Then on left low mangrove with locally Batis flats, a bit of mangrove on right but mostly sugar cane. Then sugar cane on right also, locally with rows of coconuts and bamanas.

Gregory Park.

Banana plantation on left, sugar on right. Then diverse mosaic of large blocks of cane and bananas, rows of Musa textilis as wind breaks. Small patches of bananas. Then ~~open~~ extensive area of solid banana - some thickets along tracks and near scattered houses.

More cane fields, scattered trees - bamanas, Artocarpus, Mango.

Widespread plants -
Manihot esculenta
Ricinus communis
Musa textilis
Moringa oleifera
Panicum maximum
Zinnia elegans
Acalypha wilkesiana
Xanthosoma sagittifolia
Euphorbia hirta
Erthrex spinosus ?
Cynodon dactylon
amaranthus viridis
Sida acuta
Tecoma stans
Euphorbia glomerifera
† Bidens radiata
Parthenium hysterophorus ?
Chloris inflata
Carica papaya
Pithecellobium dulce
Ipomoea batatas
Malvaviscus arboreus ?
Kalanchoe pinnata
Thevetia peruviana
Tabernaemontana divaricata
Cordyline fruticosa
Colocasia esculenta
Psidium guajava
Spathodea campanulata
Lechium edule
Amaranthus spinosus
Cenchrus echinatus
Gomphrena globosa

Visit to Jamaica Pacific

Senecio (many)
Alternanthera maritima
Nephrolepis exaltata
Asteraceae (many)
Anthurium (common wild)
Caladium bicolor

Villages with artocarpus.
Prosopis, Delonix, Mangifera
Small fields, fallow &
in Mandhot, Maize,
bananas, grass, etc.
scattered trees, thickets,
hedgerows.
Edge of Spanish Town, with
low Prosopis scrub. scattered
bananas, Prosopis and
several other large spreading
trees. Xanthoxema along ditches.
W. of Spanish Town - mainly
sugar cane. Rows of coconut
and other trees. On left a
large block of Prosopis scrub.
then more cane. A block of
Prosopis savanna on rt. Then
more cane. block of savanna
on left, cane south of it.
Hartlands station. More cane.
Cane is in all stages, but
mostly rather young.
some just planted.
Scrub forest in distance
on left and on low hills
far to right, then closer on
flat ground on right, then still
closer, then an extensive
area on rt. of a mosaic of
scrub forest, open scrub forest,
and savanna. cane still
on left. Savanna of
bananas and Prosopis.

Buckley Park.
Open forest of Prosopis and
occasional tamarind
with fairly luxuriant grass,
fading to savanna.
Some cane locally. Little
grazing in savanna. Some
almost closed Prosopis
scrub forest. Savanna
and ~~==~~ flat topped scrub
forest more ~~less~~ general.
Villages with gardens.
Prosopis scrub.
Old Harbour.
The grass in all this lowland
is a coarse bunchy type,
possibly Panicum maximum,
but grazed down.
Some cane, bananas, no
citrus. Then more open
Prosopis forest and savanna
some fields on left.
Bodles Pt.
Hills on right with some
forest - wooded bottom land
just before them. Then tall
Prosopis or Acacia scrub with
scattered trees. Route climbs
around base of hills. Some
clearing partly overgrown
in scrub forest.
Rolling low hills with
dense scrub and clearings
with pasture and cultivation.

Mosaic of patches of scrub, fields, various stages of regrowth, pasture etc. On left extensive very poor sisal plantation. Hills are limestone but relief is low, rounded. Sisal extends several miles on left savanna and scrub on rt. Then generally irregularly scrub-covered low limestone hills both sides.

More sisal on both sides.

More low hills with dense scrub and clearings. The scrub and scrub forest on these hills is broad-leaf. no Prosopis or acacia, except on flat areas between hills.

Hills are lower, more cleared, with many Bligbia, Cocos, Artocarpus, Delonix, mango, Cariopuria etc. Then a large river, Rio Minho. Mary Pen, a fair sized town.

Gallery forest and bamboo along river, cultivated or flood plain, scrub forest on hillsides - then low rounded hills with sugar cane on left, scrub on right. dense to open. Then flat ground

pasture and shrub savanna.

Muirhead Avenue and intersection with new highway. Scrub forest and savanna. Local cultivation of maize, etc.

Gallery forest along stream. Pasture and savanna, large citrus orchard on rt. young trees planted very close.

Pasture with many large trees, broad leaf.

Four Paths.

Cleared low hills, broad valley with citrus orchard with scattered cocos. then savanna.

Higher limestone hills to mostly Maize fields, scrub. pasture, scattered Cocos, ragged second growth on flat ground.

Rock Hall. Hills come closer to track. Bamboo. Pithecellobium. Young regrowth and pasture, scrub forest mosaic

Track follows foot of limestone hills. These mostly wooded - many fan palms. Cocos, Maize, bananas, then large

cane plantation on flat ground. Leave base of hills. Pastures + canefields. ~~Limestone hillocks~~ Junction. Clarendon Park 2½

Sugar cane on r.

Small river. Sugar cane with many trees - Citrus, Cocos, Bhighia, etc.

Tree and garden landscape Artocarpus, Mang. mango, Bhighia, Citrus, Theobroma, Chrysophyllum, Cocos, Mangifera Ceiba, Cecropia Spondias, Samanea, some Coffea. etc.

Limestone hills with tunnels, above fruit tree assemblage between them. Artocarpus abundant. Schizbyte, esp. Rhipsalis, on bananas. Cecropia common Higher mountains on right. Mts. on left, also (May Day Mt.

Rather wide valley of rolling low hilly ground bet. mts. dominated by this fruit tree landscape.

~~Pond~~ Pond

Valley with cultivation, fruit trees. Track climbs around hills on r. Clearings, pastures, thickets. Fruit tree landscape in

valley on left.

Climbing up into limestone hills - partly wooded, partly cleared. fruit trees abundant around houses.

Pteris longifolia is very abundant on all limestone cuts.

Valley opens on right. generally wooded in bottom, slopes cleared in a shifting agriculture patchwork.

Track skirts thus, up onto a rolling, hilly upland here pasture, some thicket, some fruit trees ind. Cocos. Maize, yams, banana, etc in gardens.

Track skirts south top of lower part of the valley noted above, where it is narrower, more a less V shaped. ~~Trees~~ Sides in shifting cult. and pasture. Where bottom is fairly wide it is grassy & in pasture citrus orchard. Thickets.

Panicum maximum covers much of slopes. but weedy and tending to grow up to weed. The

gentler slopes here are red. probably bauxite soil. The rock is limestone. Slopes on both sides a mixture of grass, sparse scrub, thicket. Cultivation of maize, yams etc. local on lower gentle slopes, also on gentler places on higher slopes. Thickets and scrub broadleaf with strong microphyllous tendency, some Bursera simaruba.

With side becomes steeper, more densely forested, with side gentle slope and mostly grass (Panicum maximum) and secondary regrowth, scrub, some large trees, mostly scattered - Ceiba, Ficus, anthropic etc. locally forming a forest, mostly open. Epiphyte conspicuous on some trees.

Valley widens and track goes down into it. Mostly cultivated and in pasture. some fruit trees. Cult. of. maize. Williamsfield.

Citrus orchards on gentler north slope, ~~to south side~~. Mosaic of thicket and grassy clearing. Large bauxite works, some mining. Kendal.

Grassy slopes with many large trees. Then rather gentle karst, mostly grassy with some cultivation and thickets, higher hills forested. Stones piled up ~~a~~ in cult. fields and pastures. Some stone walls.

Nephrolepis of. biserata abundant locally. Patches of sweet potatoes.

Large pastures on gently rolling broad valley bottom. Some thickets, bamboo, hedgerows, scattered trees.

Hills on south gently wooded, mts. on north also. Track climbs up this rolling valley bottom.

Citrus orchard. Grass and wooded hill landscape. Some large trees, thicket. Very green. Quite a few cattle. Valley a broad strip of mostly grass, hills on each side forested.

Grove Place.

Valley becomes narrower and more wooded.

Track goes north into a more pronounced karst.

mosaic of wood, pasture, regrowth, cultivation - maize, yam, citrus. Hills wooded. Stone walls and stone piles common. Much sparse scrub. More gentle topography. Maize, citrus, banana, sweet potatoes, yam.

Green Vale

Then a mostly wooded coast, some gentler slopes in pasture or maize. Small citrus orchards.

Higher limestone ranges on either side.

Becomes more gentle and more open. Large Ceiba trees. Cecropia common. Lianas abundant in forest. Many epiphytes, esp. bromeliads in some trees. Bocconia common in hedgerows, etc.

Green Hill

Hibiscus elatus (mahoe) common in valley. Breadfruit also. Pithecellobium saman where valley gets broader. Becomes a rolling plateau or basin. Breadfruit abundant.

Duck Pond Halt.

Fruit tree association. Open forest appearance.

Open terrain - cult. citrus, cacao then scrubby forest and thicket

partly microphyllous. Lianas abundant.

Wide valley with rolling hills, some small cane fields, valley mostly open. maize. Thickets.

Balaclava.

Citrus orchard. ~~Pool~~ Large trees in valley. Cocos. bananas.

Valley widens & north - large flat ~~cacao~~ bottom is sugar plantation.

Hilly country along track to west. clearing, cultivation. Large flat valley bottom on left in cane plantation. Track skirts hills on right of valley, then across flat plantation. Small mogotes in north part. Densely wooded Union Halt. and tangled with lianas.

Valley bottom very flat.

Clumps of bamboo scattered in cane fields.

Then pasture and then fruit tree landscape, ground rather rolling.

Silvah. Soil very yellow.

More flat cane land on right, several small knolls. Rolling pasture on left. Surrounding limestone hills

mostly wooded, but
some clearing.
Valley bottom becomes
rather rolling. Cane ash, almost
Appleton. flat land.
Guavas common. Spathodea
also. Gyperus along canal,
but not abundant.
Track follows narrowing
flat valley bottom.
Rolling grassy hills on left
Mogote like high one on rt.
Valley pinches out between
grassy karst hills. Some
cane on this on left. Mostly
pasture.

Black River. Then broad rolling
grassy valley bottom
with river meandering
in it. Guava thickets.

July 27 - Maggoty
limestone hill above
river secondary scrub
of ~~Guava~~ guajum, Lantana, Haematoxylon
etc. with many vines,
incl. Tragia sp. which
stings painfully.
Adiantum and Polypodium
common on rocks.
Kalanchoe, Digitaria
on soil on ledges.

July 27 - Maggoty
Rough limestone hill -
low forest, trees up to about
8 m. tall, 15 cm dbh. canopy
incomplete and irregular.
Vines very abundant -
Chiococca ~~racemosa~~ alba is
a woody scrambler
with backward pointing
branchlets, sometimes
almost spinescent.
Ferns common on ground
and on tree trunks. Shrubs
large 1-3 m. of "Cordiaceae"
Piper, etc. Vriesea and
Tillandsia on rocks and
in trees. Limestone is very
pitted and dissected.
This is evidently
secondary vegetation, as
there are remains of stone
walls and acres of
the opposite slopes are
some small corn patches
and recent clearings
on equally steep rocky
slopes. There seems to be
no soil at all.

1962 Jamaica
(From p. 168)

42884 Adiantum [illegible]
4 abundant ~~on~~ shade
in pits and ravines

4 85 ~~Trema~~ Guazuma ulmifolia Lam.
common in secondary forest

3 86 Digitaria horizontalis ?
common in openings

7 87 Hippocratea? Byrsonima crassa (N.A.) H.

1 88 Spermacoce Mitracarpus hirtus (L.) DC. ~~spicata~~ rare in openings S. confusa Rendle ex Britton

1 89 Piper microphyllum (L.) Kunth
common on earth on ledges

2 90 Selaria Urochloa (L.) Stapf
occasional in openings

July 28 – Maggoty, St. Elizabeth Parish 400 m
in thick second growth
forest on rough limestone hill.

4 91 Polypodium heterophyllum L.
very common on tree trunks

3 92 Lasiacis Lasiacis divaricata (L.) Hitchc.
occasional

4 93 Croton wilsoniana ~~sp~~ = C. wilsonii Greenbank
most abundant shrub in undergrowth

1 94 Tillandsia tenuifolia T. setacea Sw.
common, epiphytic T. setacea Sw.

6 95 Chiococca alba (L.) Hitchc.
abundant

P. Poir. (Nom.) Schlecht.

1 96 Polypodium phyllitidis
occasional

small tree; fruits immature.

decumbent to ascending.

N. Hemionitidis (L.) Sieg.

erect flowers pinkish white.

creeping, closely adpressed to bark.

culms sprawling in bushes, up to 2 m. or more long.

shrub 1–2 m. tall (or more).

staminate flowers white.

somewhat caespitose,

flowers white.

extensive woody vine, branchlets somewhat reflexed, becoming somewhat spinous on old wood; ripe fruit fleshy, thick, immature ones flattened.

fronds erect or almost so.

July 12 - Glasgow area.
above Auchlembaddie
in Cockpit country
tangled low forest
with many lianas,
some ferns, on rough
limestone. More vertical
than horizontal surface.
(photos)

July 13 - Christiana
In waste places in town
and in gardens
Cynoglossum f. amabile
Protaeranthus major
Pespalum conjugatum
Petunia
Impatiens balsamina

Marsypopetalum involucratum
Pennisetum flaccidum
Canna spectabilis
Angelonia biflora
Capraria biflora
Lantana fucata
Dissiena alata
northward
Mimosa pudica
Cyperus revoluta
Fimbristylis vulgaris
Melinis minutiflora
Grevillea robusta
Stachytarpheta mutabilis
Emilia javanica
Clerodendrum fragrans
Thunbergia alata
Rangpot Cave 1500'

Barbecue Bottom
1750'

July 14 Christiana - Albert Town,
Barbecue Bottom.
route over inlier of
shales & conglomerate -
almost completely
denuded.

Tony Town (photos) 2750'

Just south of Stettin (photos)
2750'

Albert Town
breadfruit, mangoes
bananas, coffee

Burnt Hill - Pen Thelaway
Extremely dissected
karst, shade up to
pinnacled limestone
1900-2000', extreme
solution features
cockpits - sinks with
red soil in them (photos)
covered by a low tangled
forest extremely lich.
in Euphorbiaceae, Myrtaceae
etc. Clusia 2 sp. Guettarda
ferns. Rubiaceae.
Hard agglomerations
of iron oxide weathered
out in coral. Like chapes
cliffs but with good
strong foot holds and
hand holds. Myriads of
land shells.

1962 Jamaica
(ctd. from p. 184)

42817 Portlandia grandiflora L.
rare

3 98 Piper amalago Sw.
common

4 99 (Lam.) Ocotea nebulosa Proctor (1967)
rare

~~42900~~ same - edge of tangled scrubby fruit

42900 Psychotria nervosa Sw.
rare

5 01 Guettarda argentea Lam. var.
common → glabrata Urb.

2 02 Hamelia patens Jacq
common

2 04 Drymaria cordata (L.) Willd.
common in grass
(see next page for 2 more, 42905 & 06)

July 23 - Glasgow area, above Auchtembeddie, in tangled forest on rough limestone bluff

4 07 ~~Sr~~ Forsteronia floribunda (L.) ~~H.~~ vine, climbing in trees; flowers white.

4 09 Pilea grandifolia (L.) Lindl.
common

2 09 Polypodium "porcatum × plumula"

3 10 Syngonia podophylla (Willd.) Willd

4 11 Cordia bullata (L.) R. & S.
common on road cut

1 17 Cheilanthes potholeoides (Desv.) Proctor
occasional on road cut

shrub 3 m. tall; leaves glossy.

shrub 2 m. tall, spikes pendent.

small tree; fruit immature.

shrub 1 m. tall; flowers white; fruit immature.

shrub 2 m. tall; ripe fruit purple, fleshy (mostly immature)

ripe fruits caducous on sticky pedicels.

Peak of Manchioneal
400 m.

branched shrub, stems thick, green, leaves bullate, glossy; panicles red.

fronds erect
(said to be apogamous triploid form)

shrub fruiting ~~flowering~~ spikes

white, fleshy.

shrub 1 m. tall; corolla white; fruit red.

Pinus.

same - other ~~woody~~ feature

4 1905 Euphorbia hirta ? rare in

3 06 Tragia volubilis L. common in

July 28 - Christians, Manchester Parish on dissected limestone hills 900 m

4 1/2a Polypodium pilosella pilosellum L.

3 13 Pilea ~~aquatica~~ (Willd.) Lind. shaded in fissure

3 14 Anthurium crassinervium (Willd.) Engl. on cliff

2 15 Spermacoce ~~hirta~~ diffusa on shade of cliff

1 16 Asparagus plumosus naturalized around cliffs

*

same - vacant lot, limey soil

2 17 Cynoglossum amabile Stapf & Drumm. naturalized

2 18 Anemia adiantifolia (L.) Sw. roadside bank

July 29 - Barbecue Bottom 1250' 6 mi. n. of Albert Town, Cockpit Country, Trelawny Par. Trelawny on limestone cliffs

7 19 Thelypteris reptans reptans (Sw.) Proctor Mocho roadside banks, abundant,

1 20 Gesneria acaulis Sw. abundant on vertical faces flowers scarlet

6 21 Thelypteris serrata ~~Cav.~~ Alston (Sw.) Proctor locally common on road bank

4 22 Rondeletia asperula Benth. (Wild.) occasional on vertical faces (Mocho) shrub up to 1 m. tall, flowers whitish.

prostrate

twiner; stinging hairs.

climbing on limestone rocks

shrub much-branched, stems brown; leaves firm, rugose; panicles red caespitose, clumps of short erect stems, spikes ~~glaucous~~, purple. scrambling; flowers white.

Jacq. Mocho climbing to several meters; fruit green.

1962 January

42923		Rondeletia (as sp. nov.) occasional on vertical faces	erect shrub 1 m. tall.
x	24	Rondeletia occasional on vertical faces	shrub; perhaps a hybrid bet. 42922 + 42923 acc. to Proctor. flowers white locally called "Madame Fate".
1	25	Hippobroma longiflora (L.) G. Don common along roadsides	
1	26	Polystichum echinatum (T-F) rare, in shade below road	small tree 4 m. tall; flowers red.
x	27	Phyllanthus occasional in forest below road	

July 29 - Ramgoat Cove
n. of Albert Town, Trelawny Parish
on steep embankment below road on limestone cliff

2	28	Acalypha [illegible] Hemsl. & Pittier occasional	erect shrub 3 m. tall.
4	29	" " occasional	erect shrub 3 m. tall, flowers white,
2	30	Eugenia [illegible] Willd. rare	shrub. flowers white
3	31	Alchornea [illegible] Benth. occasional	erect sparsely branched shrub 1.5 m tall, fruit red. bark very bitter
3	32	Portlandia coccinea Sw.	shrub
2	33	Psychotria asiatica L. rare	shrub, fruit immature
5	34	Eugenia [illegible] (Sw.) DC. rare	shrub 3 m. tall; fruit immature
5	35	Rondeletia [illegible] & Urb. occasional	shrub, 3 m. tall; flowers white.
3	36	Rhytidophyllum tomentosum (L.) common in open.	shrub about 1 m. tall; leaves rugose; fls. greenish yellow.

1962 Jamaica

42937		Pilea ? nov.	
2		common	
2	38	Tectaria heracleifolia (Willd) Underw.	
		occasional	
4	39	Cheilanthes notholeaenoides ? (Desv.) Mett.	
		common on rocks along road	
		July 29 - Burnt Hill,	
		Cockpit Country, Trelawny Parish	
		on hill of deeply dissected	hard limestone
1	40	Asplenium inaequilaterale	
		rare	
1	42 (Lichen)		
		rare	
2	43	Adiantum tectum	
		occasional	
1	44	Polypodium angustifolium Sw.	
		occasional	
5	45	Gueltarda argentea Lam.	
		rare n local	
1	46	Portlandia coccinea Sw.	
		occasional n cliff	
5	47	Lonchocarpus (Mich. Robinsonii) ? parviflorus ?	
		common	
3	48	Cocoloba Swartzii Meisn.	
		occasional	
4	49	Solanum stellatum Jacq.	
		rare	
1	50	Pavonia scabra (Vogel) Walp. ?	
		common	
2	51	Chiococca parvifolia Wydler	
		occasional	

leaves rugose, glossy, panicle red.

1800-2000'

small tree 5 m. tall, branching conspicuously terminaloid, fruit immature.

shrub

extensive liana, flowers bright purple, fruit immature.

vine

shrub, fruit not quite mature

small tree

twiner; fruit immature.

3	52	Eugenia sachetae Proctor (Type) occasional			shrub; fruit immature
2	53	Asplenium jamaicense Jenm. common in rock pits and crevices			bluish green
1	54	Polystichum hancianum Maxon occasional in shady limestone crevices			proliferating at tips.
1	55	(near genus Eupho. acc. Proctor Webster) rare Argemia laevigata Lam.			shrub
2	56	Andiroba inermis Sw. common			slender tree; stinging.
1	57	Selaginella hispida (W.) (W.) rare in pit in rock		A. Br.	pale green
1	58	Echites? Mandevilla hirsuta (Jacq.) Woodson bract			flowers yellow, conspicuously contorted
4	59	Eugenia clausdorfiana Urb. occasional			shrub
3	60	Heliotropium Tournefortia hirsutissima L. rare		Sing.	shrub; fruit green.
3	61	Pimenta obscura Proctor (coll. 1978) rare			~~coast~~ shrub; aromatic when broken.
1	62	Loxitta hirtissima Lam. rare			sterile shrub.
4	63	Neea jamaicensis ~~rare~~ Heimia salicifolia (Sw.) Fawc. & R.			~~shrub~~ small tree; fruit scarlet.
5	64	Daphnopsis occasional	Daphnopsis tinifolia (Sw.) Meissn.	W. Indies.	shrub, flowers green
3	65	Nephrolepis hirsutula common in wet open places	Nephrolepis biserrata (Sw.) Schott		fronds erect.
1	66	Piper rare	Piper aduncum L. var. ovatum (Vahl) C. DC.	Stettin	shrubs; stem
		July 29 - just south of Stettin			
1	67	Paspalum fimbriatum rare			

1962 Jamaica

42963 Mimosa [illegible] (DC.) Wgt
very common on eroded land

July 29 - Tory Town, northwest of Wait-a-Bit, Trelawney Parish
on eroded road bank on non-calcareous soil

42969 Stachytarpheta jamaicensis (L.)
4 ocanisma

" 70 Digitaria [illegible] Hitch.
common

" 71 Stachytarpheta mutabilis (Jacq.)

4 72 Emilia javanica (Burm. f.) Rob.
common

shrub 4 m. tall, diffusely branched, flowers white.

2750+
1-0 m

Kold much-branched;
- flowers dark purple.
sprawling

flowers

, turning
with age.

Standard Form 63
November 1961
GSA Gen. Reg. No. 27

MEMORANDUM OF CALL

no
Date
Time

TO—

☐ YOU WERE CALLED BY— ☐ YOU WERE VISITED BY—

Jamaica 9240 25th Pl NE

n Ave B/d & Richmond Rd. 832-930

TELEPHONE: Number or code Extension

☐ PLEASE CALL
☐ WILL CALL AGAIN
☐ RETURNING YOUR CALL
☐ IS REFERRED TO YOU BY:

☐ WAITING TO SEE YOU
☐ WISHES AN APPOINTMENT

LEFT THIS MESSAGE: _____

Received By—

63-106

U.S. GOVERNMENT PRINTING OFFICE 1960 O—580604

1962 Jamaica

42968 Mimosa hamatonota (DC.) Kuntze
very common on eroded land

July 29 - Tory Turn, northwest of Wait-a-Bit, Trelawney Parish
on eroded road bank on non-calcareous soil

2750'
8400 ft.

42969 Stachytarpheta jamaicensis (L.) Vahl
4 occasional

" 70 Digitaria horizontalis Willd.
common

" 71 Stachytarpheta mutabilis (Jacq.) Vahl

4 72 Emilia javanica (Burm.f.) Rob.
common

shrub 4 m. tall, diffusely branched, flowers white.

much-branched; flowers dark purple. sprawling

branched herb; flowers old-rose pink flowers brick red, turning ~~purple~~ purplish with age.

1962 Jamaica

July 31 - air - leaving Jamaica
Patch reefs and cays outside the Palisadoes - a long and slightly complicated spit extending out from ~~west~~ east of mouth of Hope River, made up almost entirely of river sand and gravel. Has mangroves along harbor side beyond airport, and covering wider lobes.
Sandy places near airport covered by a pure stand of Tribulus cistoides with unusually large flowers.
West of Kingston harbor, inside the spit that extends out to enclose it, is a very low saline flat, partly bare, partly covered by Batis, and with considerable mangroves, extending well inland in the north part of the west shore.
Toward north, east is a considerable area of "semi-cockpit" country, where the mogotes are definitely separated by flat bauxite(?) areas which form a sort of network (this must be near Claremont) of grassy ground.

The reefs along this north coast are narrow, except at indentations, and fall off rapidly seaward but with considerable sandy bottom between broken reef ridges parallel to shore.
Reefs in Montego Bay w. of end of air strip have outer parts of striking parallel grooves & ridges ⊥ to coast.